A Gulf Publishing Company Publication

The OIL WEEKLY

Member Audit Bureau of Circulations

VOLUME 54, No. 2

JUNE 28, 1929

Edited Weekly at Houston, Texas

SPENCER W. ROBINSON, EDITOR

TABLE OF CONTENTS

Special Features

California Conservation Plan Abolished 33

Why California Curtailment Was Not Successful 33
By Wm. E. Green

Deep Sands Throw New Light on Barbers Hill 34
By Jack Logan

Experiences Above the Andes With Roy E. Leigh 39

Natural Gas Development in the Southwest 44
An editorial by Kent Ridley

Texas and Louisiana Fields Supply United Gas Company Lines 57

Importance of Gas in Southwest Shown in Companies' Growth 62

Building Line Across Bay Required Special Tools and Methods 67

Four Main Compressor Stations Handle Gas Through Long Lines 69

Formations in Coast Country Require Special Pressure Control 80

Regular Departments

Advertisers Index 154

Markets - Production - Crude Prices 89

United States Production Estimates 96

Crude Oil Price Quotations 92

Completions for Past Week in All U. S. Fields 124

Permits Granted for New Wells 131

Wildcat Drilling Reports from All Important Areas 135

News from California Fields 103

North and West Texas Field Notes 101

Gulf Coast Field Development Notes 108

Oklahoma - Kansas Field Notes 106

Louisiana - Arkansas News Notes 111

News from Rocky Mountain Fields 112

Personal Mention — Men You Know 99

New Equipment, Catalogs, Bulletins, Books 149

Squeaks from the Bull Wheel 152

Copyright, 1929

Published Weekly

by

GULF PUBLISHING COMPANY

OFFICE OF PUBLICATION

3301 Buffalo Drive, Houston, Texas

R. L. DUDLEY, *President*

A. L. BURNS, *Gen'l Manager*

SPENCER W. ROBINSON, *Editorial Director*

J. KENT RIDLEY, *Managing Editor*

NEW YORK: Room 613, 250 Park Avenue, Dick Swinsky, Manager.

PITTSBURGH: 703 Park Bldg., W. W. Pigue, Manager.

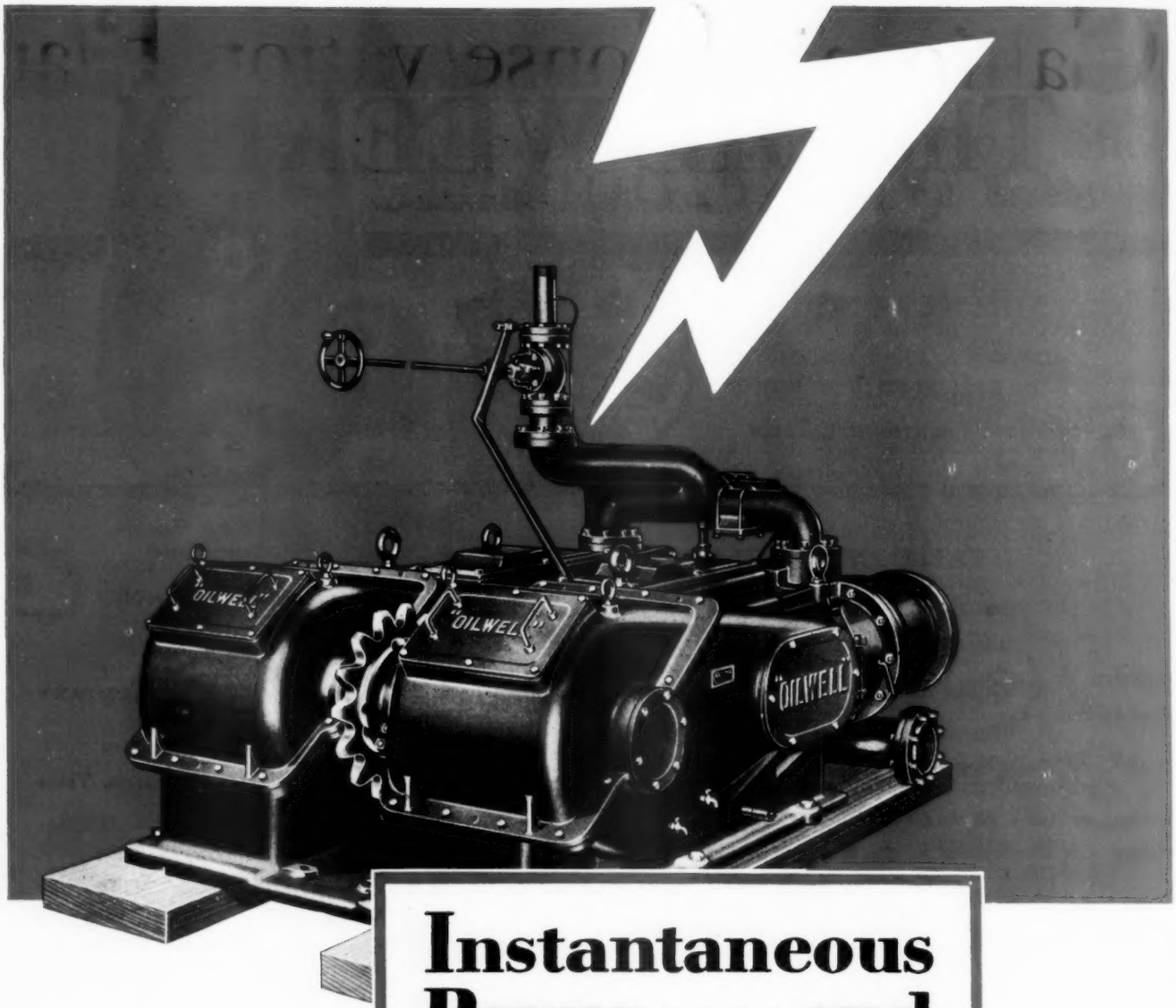
CHICAGO: 624 S. Michigan Ave., O. R. Waller, Manager.

LOS ANGELES: 416-417 Haas Bldg., W. E. Green, Manager.

TULSA: 913-916 Hunt Bldg., J. F. Carter, Jr., Manager.

FORT WORTH: 203 W. T. Waggoner Bldg., H. H. King, Manager.

Issued Friday of each week. Single copies 10 cents. Subscription price: Domestic $1.00 a year, Foreign $1.00 a year. Subscription restricted to those engaged in the producing and pipe line branches of the oil business or the manufacture and distribution of oil field supplies. Advertising rates on application.



Instantaneous Power · · · · and more than you will ever need

The "Oilwell" 12"x12" Twin Cylinder Engine is a powerful unit, compact and ruggedly constructed. Designed for 250 pounds steam pressure. All working parts are enclosed and operate in oil baths, insuring smooth performance and longer life. Crank shaft is mounted in heavy duty Timken roller bearings, giving additional power and capacity. Both cylinders are controlled by one throttle.

For further information on this engine, inquire at any of our branch offices or write for Bulletin 79.

"Oilwell" also makes an 11" x 11" Twin Cylinder Engine and a 12"x12" Single Cylinder Engine—both of the enclosed type.

981

OIL WELL SUPPLY CO.

NEW YORK—LOS ANGELES—PITTSBURGH, U.S.A.—SAN FRANCISCO—TAMPICO—LONDON

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

California Conservation Plan Abolished

Umpire issues statement advising operators that A. P. I. effort will be discontinued

LOS ANGELES.—Measures of conservation sponsored by the sub-committee of the regional committee of the American Petroleum Institute in California have been completely discontinued and all operators released from compliance with general orders issued by Umpire F. C. Van Deinse.

This step was taken in view of the future enforcement of the recently enacted law to prevent the waste of gas. It means that conservation is absolutely at an end in California for the present, excepting the oil that has been shut in over a period of years.

F. C. Van Deinse has issued a statement that he is no longer acting as umpire but will help to formulate plans for handling surplus gas. He has also asked the various operators for timely suggestions concerning the present problem.

Why California Curtailment Was Not Successful

By Wm. E. GREEN

LOS ANGELES.—In spite of the fact that the daily average production of crude in California for the week ending June 22 is close to 850,000 barrels, and in spite of the failure of the curtailment movement in this state, no reduction in the price of crude is anticipated. The fact that Santa Fe Springs is nearing the 300,000-barrel mark, which has been set as the peak for that field, indicates that before long there will be a natural decline there that will readily offset the effect of overproduction during recent months. The belief is somewhat general in California that the demand for light oil does not really justify a shut-down. As a matter of fact, the production figures show that very little oil has been shut in since proration became effective. The amount of oil shut in under this plan is said not to exceed 25,000 barrels, in all, although at least 130,000 barrels of daily production has been shut in during the past two or three years. Most of the latter, however, is heavy oil for which the market has not been very active.

The failure of curtailment in California is not difficult to explain. Every major company in the state wants and has need for refinable light oil, with the possible exception of the Standard Oil Company of California. In round figures, the storage of all petroleum products in California is about 160,000,000 barrels, which is about 400,000 barrels below the storage peak reached in March, 1926, when the total aggregated 160,419,966 barrels. Of the grand total storage, some 50,000,000 barrels is held by the Standard Oil Company of California. This is the figure given by that company in its report of operations for the year 1928. Undoubtedly, this figure has been increased since January 1. At this writing, only the Standard Oil Company and The Associated Oil Company are curtailing their production of crude. The fact that the Standard Oil Company holds heavy stocks explains one of the reasons why that company is more than willing to curtail. Associated Oil Company agreed to curtail providing that arrangements could be made with a major producer to supply it with its requirements above allowable output of its own wells. This resulted in a contract whereby another large company was to supply Associated with 1,500,000 barrels of refinable crude at posted prices. This has really forced the Associated Oil Company to carry out curtailment plans agreed upon, although that company has felt the need for additional crude supplies. With the opening of the Standard Oil Company's wells, it is a foregone conclusion that the Associated Oil Company will resume producing crude at an accelerated rate.

It can be said that practically all large and small operators throughout California, except Associated and Standard, have never taken any real part in the curtailment movement. In practically all cases it has been contended that as long as the demand made it necessary to produce to capacity, there was no sound reason for shutting in production. In fact, only recently, the Pacific Western, Shell Oil Company and the General Petroleum Corporation opened their wells at Ventura Avenue, regardless of curtailment orders, on the ground that they were not producing sufficient oil to take care of current requirements. The Associated Oil Company also followed this move about four days later. This shows the situation that exists in many of the major California fields. Few companies have paid very much attention to curtailment orders at Long Beach and Santa Fe Springs, and early last week the action of several leading companies at Long Beach in opening up their wells, brought to an end the curtailment movement in that area. Practically no attention was paid to curtailment orders at Huntington Beach and, as a general rule, none of the smaller independent companies disregarded the curtailment movement entirely, as they seemed to be able to market their entire production readily.

In view of the many complex problems that confronted the industry in California, and the fact that little or no heed was paid to the efforts of F. C. Van Deinse, umpire, to bring production down to the average that prevailed in the state last year, proration has been entirely lifted in California. In explaining the reason for abandoning all curtailment effort, Umpire Van Deinse stated that it was felt that the new law to prevent waste of gas in the state would bring about future enforcement that would prove effective also in curtailing the output of crude oil. Perhaps, after all, this is the most satisfactory method of culminating what has otherwise appeared to be an unsuccessful effort to curtail production. At any rate, the lifting of proration restrictions will not have any material effect upon production and will in all probability hasten

(Continued on page 114)

Aerial view of east side of Barbers Hill soon after discovery of mile-deep production

DEEP SANDS *Throw New Light on* BARBERS HILL

One time "Jonah" of all Coastal Domes now gives promise of paying off from flank developments

By JACK LOGAN
Staff Representative

EXTENSIVE use of geophysical instruments during the past few years in the Gulf Coast has resulted in the discovery of numerous salt domes and promising structures, and as a consequence much of the new development of the region has centered on those recently found areas. But in the meantime the industry has not forgotten the rejuvenation of Sour Lake and Humble through development of new deep sands; or Spindle Top, which in 1925 was thought to be practically exhausted after producing 48,000,000 barrels of oil, but which has boosted that total recovery to more than 100,000,000 barrels since the discovery of prolific flank sands at the close of 1925. And while the development of the new domes has progressed, the search for new pay in the old fields has been carried on persistently. Since the fall of 1928 that searching has resulted notably in the first commercial production at Old Hackberry, Louisiana; discovery of a rich sand in the southeast part of the Humble field; opening of prolific production below 7200 feet at Evangeline, Louisiana; and the rise into prominence of Barbers Hill through the discovery of prolific deep sands on the south and on the east flanks of the dome.

Long Run of Failures

The development of the new pay at Barbers Hill is particularly interesting, inasmuch as it has given to that field its first era of really worth-while production after a quarter of a century of prospecting.

During that quarter-century of more or less futile effort, prior to the opening of the first deep pay in October, 1928, nearly $4,000,000 was spent, drilling 153 tests, of which 111 (or 72 per cent. of the total) were failures; giving Barbers Hill one of the highest dry hole records of any Coastal area that had ever been drilled. Large companies and small tried their luck there, and after repeated failures they usually withdrew, in despair or disgust, leaving what oil there might be to others who were more optimistic or richer. The first test there was drilled in 1902; the 25th, drilled in 1916, was the first commercial producer. The next producer was completed in 1918, and by the summer of 1928 the field had produced barely a million barrels, although producing areas had been opened by then on three sides of the dome. According to various viewpoints, Barbers Hill was a huge joke, a grand fizzle, or a sad mistake. As a salt dome it was a fine specimen, with prominent surface elevation and gas and sulphur water in shallow wells, but as an oil field it was no good.

Flank Production

Today, however, it is a different story. Since October, 1928, there have been 21 tests completed, of which 16 (or 76 per cent. of the total) were producers; the new success being due to the discovery on two sides of the field of deep sands that have boosted the production to approximately 9000 barrels daily, stimulating deep drilling in those sections, and giving rise to new deep tests on other sides of the dome.

On the east flank, about mid-way along the periphery between the new deep production areas on the east and the south sides, Republic Production Company has started a deep test; and Mills Bennett's E. W. Barber 1 and Humphreys Corporation's Kirby A-8, respectively, are deep tests drilling on the north and the northwest flanks of the dome. In fact, only a very small percentage of the periphery of the dome has been drilled in so far as the deep sands are concerned. Early tests rarely went below 4000 feet, because of the limitations of the machinery and drilling methods available at the time. With the deep sands barely touched, as yet, therefore, and with deep drilling now made practicable by improved machinery, the possibilities of the field at present are vast and encouraging.

Large Salt Dome

Barbers Hill is a relatively large salt dome. At its widest point, from north to south, it is 11,600 feet across, and from

A new light is thrown upon the theoretical value of deep flank sands in the Gulf Coast region by information given in the article herewith. Data concerning the importance of Oligocene production with relation to dome flank exploitation present food for contemplation by all operators who hold acreage on supposedly fully-exploited salt dome acreage. Jack Logan has detailed in a delicately exact manner the history of one of the Coast's oldest domes; he has shown logically why it is reasonable to expect a future recovery of at least 75 million barrels from Barbers Hill. The article also exemplifies the practical value of that much discussed subject, "Straight Hole Drilling."

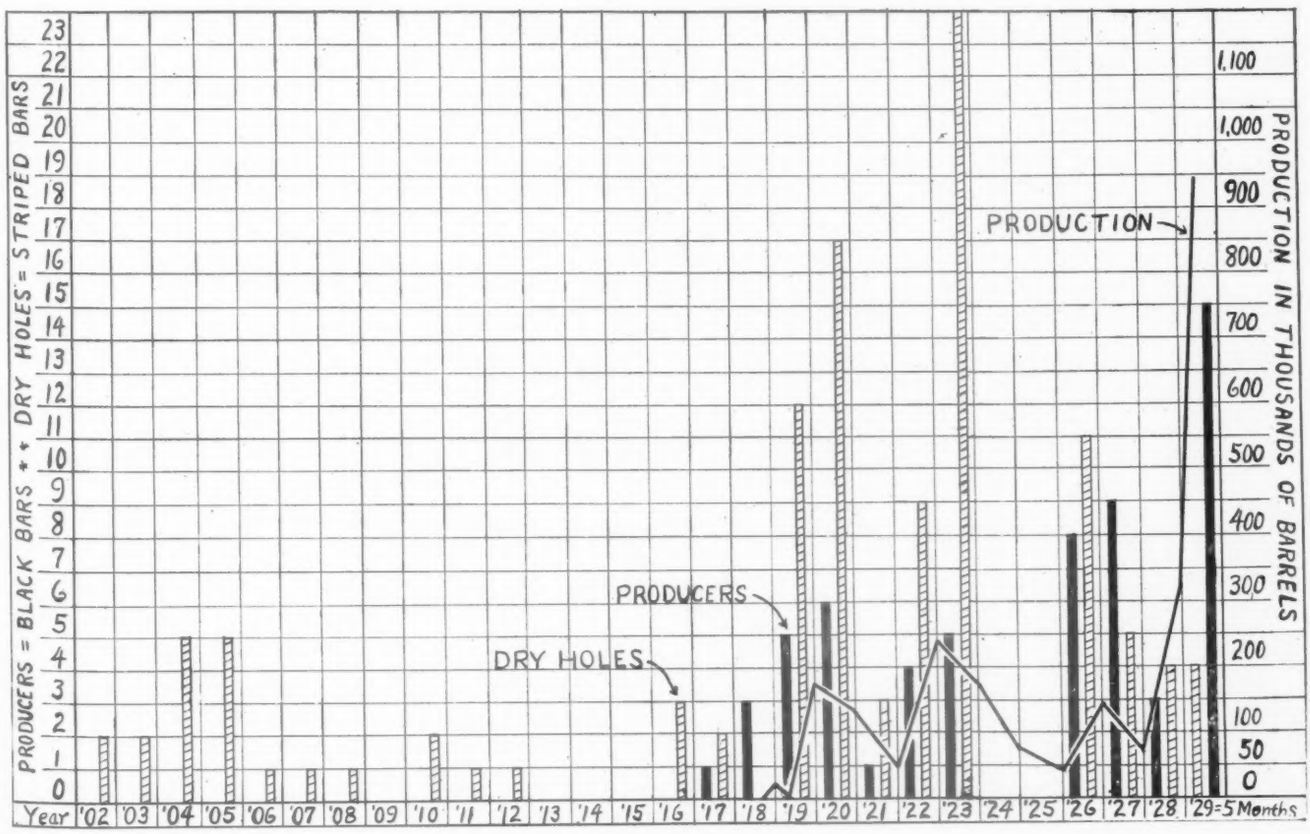
east to west the greatest width is 9200 feet. A large percentage of the Gulf Coast salt domes have an average diameter of less than 8000 feet across the top.

By measuring carefully around the edge of the dome, the periphery is found to be 32,800 feet. It is interesting, now, to compare that total periphery with the two small portions of it along which the deep production of the past few months has been developed. On the northern part of the east flank of the dome, in that deep sand area opened by Mills Bennett Production Company's Smith 1, the deep producers extend along the periphery a total of 900 feet, and on the south flank, in the area opened by Yount-Lee Oil Company's Chambers County Agricultural Association 1, the completed producers spread out across 800 feet. The two deep sand areas together, then, comprise a total of 1700 feet along the periphery of the dome. In relation to the total periphery of 32,800 feet, therefore, they constitute only about one-nineteenth, or five per cent., leaving possibility for corresponding deep production on 95 per cent. of the total periphery.

As to what part of that potential will actually prove productive, of course, no one knows. But it is interesting to note that as yet the deep sands of the Middle Oligocene formation, from which the above mentioned present deep production is coming, have been drilled into in only four separate areas along the periphery, and that they have proved productive in three out of the four cases, while it is possible that the lone test of the fourth area tested may have been a failure by reason of a crooked hole or some other cause outside of the absence of the pay sands. That test which, at any rate, did not prove productive in the Middle Oligocene was Humble Oil & Refining Company and Marland Production Company's Kirby Fee 1, located on the northwest side of the field, finally abandoned around 5700 feet. Of the three areas which have proved productive from the Middle Oligocene, one on the east flank of the dome and the other on the south flank, have been mentioned above. The third is on the southwest flank. In that area Mills Bennett Production Company and the Moody Corporation completed E. E. Barrow 5 originally as a 100-barrel pumper at 3470 feet in a Miocene sand, but later deepened, completing it March 17, 1927, as an 800-barrel flowing well from the Oligocene at 4551 feet. Considering this past record, then, of three successful attempts out of four to develop production in the Oligocene, it is reasonable to expect further success in efforts at other points on the edge of the dome, and to conclude that ultimately Barbers Hill will rank high in total production.

Many Oil Sands

In fact there is one circumstance which points to a large total recovery from the field, and that is the presence of an unusually great number of oil-bearing sands, particularly now that deep drilling into the Oligocene has revealed numerous new sands. An idea as to the multiplicity of oil sands is given in a general study of the log of Humphreys Corporation's Kirby B-6, located in the now active east part of the field. At 2200 feet it passed through the rich Miocene sand in which the Rexal Petroleum Company recently completed Shaw 1 as a 650-barrel pumping well. At 4100 feet it penetrated the Miocene sand which yielded the flowing wells of the Humphreys Corporation's Kirby "B" lease. At 4900 feet it topped a 100-foot thick sand in the upper part of the Oligocene. At 5054 feet it entered a 71-foot thickness of the "big lime," which serves as a marker, lying immediately above the rich sands of the Middle Oligocene. Then in the Middle zone of the Oligocene, Kirby B-6 had five thick sand bodies between 5387 and 5809 feet. There was a 50-foot sand at 5498-5548 feet; a 42-foot sand at 5571-5613 feet; then two sands 30 feet and 20 feet thick; and finally a 48-foot sand at 5761-5809 feet. And still the test was not out of the


PRODUCERS = BLACK BARS + + DRY HOLES = STRIPED BARS
PRODUCTION IN THOUSANDS OF BARRELS
PRODUCTION
PRODUCERS
DRY HOLES
Year '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23 '24 '25 '26 '27 '28 29=5 Months

Producers and dry holes completed each year at Barbers Hill, and curve showing yearly production

Map of Barbers Hill, showing completed and drilling tests

PRESENT DRILLING OPERATIONS AT BARBERS HILL

Company	Tests
Mills Bennett Production Company	4
Sun Oil Company	2
Yount-Lee Oil Company	2
Humphreys Corporation	4
Rexal Oil Company	2
Talbot & Markle	1
Republic Production Company	1
Moody Corporation	1
Total	17

Oligocene. Furthermore, all of these Oligocene sands were clean, being free of shales, and most of them rich in oil. Summing up, in the 311 feet between 5498 feet and 5809 feet there were thick sand bodies aggregating 190 feet, or 61 per cent. of the total. And in addition to the above mentioned thick sands there were various thinner sands.

Such a condition as this, with many rich sands within reach of the drill, has been responsible for the large amounts of production at Spindle Top and at Humble, each having produced over 100,000,000 barrels, leading all other Coastal fields, and it is within reason to believe that ultimately there will also be large total recovery from the Chambers County dome.

Possible Recovery

As to the exact amount of oil which the dome will ultimately produce, it is interesting to project on the future a picture of what is easily possible, considering the records of various other Gulf Coast domes, and of several wells in the Barbers Hill field itself. It was pointed out above that the periphery of the dome is 32,800 feet. Assuming, conservatively, the possibility of production from the new deep sands on a strip 400 feet wide, there would be all the way around the dome, a total of 300 productive acres. And assuming further, that the yield will be an average of 250,000 barrels per acre the total ultimate recovery would be 75,000,000 barrels. At first thought, a conjecture of this sort may seem somewhat fantastic and impractical. But it is easily within reason, being based altogether on reasonable assumptions. For instance, in view of a like condition on various other domes, one is adequately entitled to assume a productive width of 400 feet; and it is highly probable that the rich deep sands will be found all the way around the dome, having already been proved to extend more than half way around it. Likewise, the assumption of 250,000 barrels ultimate recovery per acre is altogether palpable, considering that one well alone, Yount-Lee Oil Company's Chambers County Agricultural Association 1, has produced over 400,000 barrels and is still producing; while another Barbers Hill well, Humphreys Corporation's Cornelia Barber 1, has produced around 200,000 barrels in a little over three months and is still flowing over 1500 barrels daily. At Spindle Top the recovery from 300 productive acres has already been over 300,000 barrels per acre on the average, figuring in the poor as well as the rich acreage, and much of that area is still highly productive. West Columbia has produced over 70,000,000 barrels from 275 acres, or an average of approximately 260,000 barrels per acre. Finally, an ultimate recovery of 75,000,000 barrels at Barbers Hill would by no means be unprecedented among Gulf Coast fields, for already Spindle Top and Humble have each produced over 100,000,000 barrels and West Columbia over 70,000,000 barrels; and neither of the three is anywhere near depletion.

Little Deep Drilling

Casual mention was made above of the fact that in spite of numerous tests, there has been relatively little deep drilling at Barbers Hill. Checking over the logs of tests there, it is seen that prior to the latter part of 1927 very few holes reached more than 4100 feet. That seemed to be about the maximum depth considered practicable, and various tests which might have found production if deepened another thousand feet or so were abandoned at about that depth. It is interesting to note, for example, that the discovery well of the new prolific deep sand on the south flank, Yount-Lee Oil Company's Chambers County Agricultural Association 1, which was completed at 5318 feet, is less than 500 feet north of Mills Bennett's No. 1 on the same lease, abandoned at 4147 feet in 1922. Yount-Lee Oil Company's Chambers County Agricultural Association 3, new deep well 400 feet east of No. 1, and completed for 1200 barrels at 5329 feet, is approximately 150 feet north and 150 feet west of Gulf Production Company and Humble Oil & Refining Company's Chambers County Agricultural Association 1, which was abandoned dry at 2283 feet in 1916 after having an oil show at 2200 feet. Directly between Yount-Lee Oil Company's present producers, No. 1 and No. 3 on the Chambers County Agricultural Association lease, at a point only 100 feet east of No. 1, an early test, Ben Fisher No. 1, was abandoned at 1800 feet. In addition there were several other tests within 500 feet of the present deep producers on the south flank abandoned in the early days at relatively shallow depths.

Salt Plug Steep

An important fact revealed by the numerous tests at Barbers Hill is that the salt core slopes off from the top of the dome very abruptly on nearly all sides; the dip being unusually steep as compared with the dips of most of the other Gulf Coast domes. Although the dip varies considerably at different points, in general the dome is slightly rounded off at the top, and then slopes off at an angle of about 75 degrees to an unknown depth. This steep dip has been partly responsible for many of the unsuccessful tests drilled around the dome; making it necessary that locations be made with more than ordinary accuracy lest the test hit the dome too high or else miss it altogether by being too far away from it.

While the dip in general is around 70 degrees, the southwestern edge is faulted and irregular, showing an average dip of

APPROXIMATE DAILY PRODUCTION OF PRESENT WELLS AT BARBERS HILL

Operator—	Barrels
Northwest Side	
Humphreys Corporation, A. E. Barber 1	8
A. E. Barber 3	8
Kirby A-5	8
Total, 3 wells	24
Southwest Side	
Mills Bennett Production Company Barrow Fee 31 ac. Nos. 4, 5, 7, and 9	30
Japhet 1 well	15
Humble Oil & Refining Company, Blaffer-Farish 1	10
Total, 6 wells	55
South Side	
Yount-Lee Oil Company, Chambers County Agricultural Association Nos. 1, 2 and 3	2,450
Gulf Production Company, Fisher Fee 1	650
Total, 4 wells	3,100
East-Northeast Side	
Mills Bennett Production Company, Hamman 1	600
Smith 2	800
Kirby 15-ac. 1	80
Humphreys Corporation, Kirby 1-C	350
Cornelia Barber 1	1,565
Mills Bennett-Republic, Means 1	485
Joe Bashara, Tarbutton 1	250
Rexal Petroleum Company, Shaw 1	30
Talbot & Markle, Ilfrey 1	1,350
Unice Oil Company, Feldman-Gulf 1	400
Total, 10 wells*	5,910
Northeast Side	
Humphreys Corporation, Kirby "B" lease, Nos. 2, 3 and 4	170
Total, 3 wells	170
TOTAL FOR FIELD, 26 WELLS	9,259

*Two wells in this section, Mills Bennett Production Company's Smith and Kirby 15-acre tract No. 1, are temporarily off production being worked over.

slightly less than 60 degrees; and since much of the early drilling was in that area, the problem of properly locating wells was further complicated.

The eastern flank of the dome, on the north extremity where one of the present deep production areas is located, likewise is irregular; being characterized by an over-hang of the cap rock. That over-hang was discovered in September, 1927, by Humphreys Corporation in Kirby B-5, which hit the cap rock at 2208 feet, and after passing through 83 feet of limestone, cavity and anhydrite, went back into regular formation, finally being abandoned in sandy shale at 4949 feet. This same over-hang, with thickness varying from 100 to 250 feet, is known to extend at least 1200 feet south of the test in which it was first noted; having been found in each of the wells from which the present deep production of that area is coming. That over-hang is a common source of trouble in tests of the area, the cavities and extremely porous limestone in it causing loss of returns of the rotary drilling mud used.

Straight Holes Imperative

Because of the steep dip of the dome it is of great importance that holes be drilled as straight as possible on any flank of the field, and with production now established at depths a mile or more from the surface, there is a real problem in keeping the holes straight. That problem is an important one on the south flank of the dome in the new deep sand area; and is of even more importance in the north end of the east flank on account of the above mentioned over-hang and the hard formations above it. In regard to tests at Barbers Hill, P. C. Murphy, assistant to the president of the Humphreys Corporation, is authority for the statement that nearly all of the crooks start in the holes there between 1500 and 3000 feet. "If we are able to carry a hole within two degrees of vertical to 3000 feet," he said, "we have experienced no difficulty in keeping the hole within those limits to our producing sand around 5200 feet. In other words, the hard formations between 1500 and 3000 feet are where we have our trouble, and if we can successfully drill through these, there is very little trouble completing a well to 5200 feet which is comparatively straight."

Humphreys Corporation is one of the principal operators at Barbers Hill, and has done a great deal of work on the problem of keeping holes straight in drilling wells. And so it may be of value to give more consideration to the results that company has obtained. The above statements by Mr. Murphy are from a letter which he sent to E. L. Decker of Martin-Loomis Corporation, Houston, in reply to an inquiry by Mr. Decker as to what Humphreys Corporation is doing in the way of correcting crooked holes. In a detailed discussion, Mr. Murphy explained that his company has worked on the theory that the two most important things to watch in getting a straight hole are pump pressures and the amount of weight applied to the bits, and has consequently been using weight indicators to control the weight of the pipe, and pressure gauges on the mud pumps so as to avoid jetting action. In addition, Humphreys Corporation makes use of the acid bottle, and recently has begun using a special angle-recording device, designed and made by Humphreys Corporation engineers. That special device is a barrel which is lowered into the hole, and which, by means of a clock and paper reel, registers the angle of the hole at desired intervals. Taking a reading at every fourble and allowing five minutes for each reading, and checking the readings taken going into the hole with similar readings taken while coming out, a complete survey of a 5000-foot hole can be made in approximately 10 hours. If desirable, the device may be so regulated as to record the angle of the hole at lesser intervals, and it is possible with it to determine the exact point at which a crook occurs in a hole. In Kirby H-1, Humphreys Corporation made a survey of the hole with the new device, and finding it crooked, plugged back from 2200 to 1100 feet to straighten.

To illustrate the seriousness of the problem of drilling holes straight, it is pertinent to point out that on the east side of Barbers Hill on May 3, 1929, Rexal Petroleum Company's McLean 1, located 60 feet from Mills Bennett Production Company's Smith 2, a 1400-barrel producer at 5147-97 feet, drilled into the latter when it (McLean 1) reached 3908 feet. Mills Bennett Production Company's well, as a consequence, quit flowing and has only a week or so ago been brought back, and it was necessary to sidetrack the Rexal Petroleum Company test.

Oligocene

As pointed out already, the principal sources of oil at Barbers Hill now are the newly discovered deep sands of the Oligocene formation, producing wells from those sands being on the east and the south flanks of the dome. The Oligocene pay was found on the east flank before it was discovered on the south flank, the discovery well of the east-side deep production having been Mills Bennett Production Company's No. 1 on the Smith four-acre tract. It was completed October 9, 1928, at 5231-72 feet, flowing 4500 barrels daily of 26 gravity pipe line oil. Following this successful test, drilling was greatly stimulated, and already 11 large producers have been completed in the deep sand, while half a dozen other tests are drilling in the area, several now being near the pay level.

Encouraged by the discovery of deep pay on the east flank, the Yount-Lee Oil Company late in 1928 started a deep test, Chambers County Agricultural Association 1, on the south flank of the dome, and that first test on January 29, 1929, came in flowing 30.5 gravity oil from an Oligocene sand at 5318 feet at the rate of 1050 barrels daily, but five days later it had increased its production to 4700 barrels daily. It maintained approximately that rate for several weeks, and then began declining only slowly, producing over 250,-

(Continued on page 115)

EXPERIENCES ABOVE THE ANDES

With ROY E. LEIGH
Special Foreign Representative

La Rosa Field, Maracaibo Lake, Venezuela, as seen from a Scadta hydroplane.
Photo Courtesy of "Scadta"

Oil Men Largely Responsible For Extensive

Air Travel *in* South America

Aerial Transport systems also furnish much scientific data on inaccessible areas

EIGHTY per cent. of the Americans who fly up and down the Magdalena River—and, by the way, North Americans contribute a large percentage of the traffic which supports the Colombian-German Society of Aerial Transport—make their first flight in Colombia, according to Herr Albert Tietjen, commercial manager of the Scatda[1] company. It is probably safe to say that this same percentage of traveling Americans arrive in the country without any definite intention of flying, since very few of them make reservations in advance, as they would expect to do in securing steamship passage.

The element of fear or timidity doubtless operates to greater or less extent in the mind of every individual while formulating the decision to attempt his first aerial flight—to no greater extent, perhaps, than in the case of the first patrons of steamships, railroads and automobiles. However, in Colombia one's decision is simplified, as, after inspecting the accommodations aboard the river boats which ply up and down the Magdalena, a feeling of repugnance on the one hand usually outweighs the feeling of timidity on the other. Strange to say, the matter of cost does not enter into the question, as, by the time one has bought clean sheets, a mosquito net, bottled water and canned food necessary to ameliorate the conditions of steamer travel, he usually finds that the total of his expenditures equals the cost of aerial passage.

After inspecting one of the river steamers tied up along the waterfront at Barranquilla, and trying to imagine ourselves spending eight or ten days—or, perhaps, twenty days—on her little pocket-handkerchief deck built just above her boilers, and eight or ten nights—or, perhaps, twenty nights—in one of her stuffy little two-by-four cabins, we felt ourselves leaning toward aerial travel. However, before making the final and for us momentous decision, we rode out to the air-port on the outskirts of the city to look over the planes.

There were six or eight Dornier and Junkers ships in port on that occasion; and Herr Behr, the chief pilot, kindly explained their details. Very gingerly, we seated ourselves in one of the passenger compartments and tried to imagine ourselves soaring through the clouds. In each plane, we found a supply of cotton for stuffing into our ears to deaden the roar of the motors and a number of paper bags bearing the printed hint *"En caso de mareo!"* (In case of seasickness), the idea being that, if the passenger loses in-

[1]Sociedad Colombo-Alemana de Transportes Aereos.

Andes Mountains near Honda, Colombia, from the air. Photo courtesy of "Scadta"

Tropical Oil Company's refinery near Barranca Bermeja, Colombia. Photo by "Scadta"

terest in his breakfast, he may politely deposit it in the bag and chuck it overboard!

Our enthusiasm for flying dropped almost as low as had our interest in the dirty, foul-smelling river boats. Just at that time a siren shrilled and we hurried out to watch the arrival of the daily plane from up-river. Nearing the air-port, which is built on the bank of the Magdalena River, the pilot throttled his motor and pushed the plane's nose downward toward the surface of the water. As she came nearer, her pontoons seemed to grow larger, reminding us of the webbed feet of a duck. She seemed to settle slowly down into the water, carefully and cautiously, very much like an old hen squatting down over the brood of ducklings. On striking the water, the pilot opened his throttle for an instant, probably to offset the retarding impact and prevent the ship from stubbing her toe. Then he turned around and taxied up to the landing-place. Immediately, one group of employees began unloading the mail pouches, and another busied themselves with lifting out the inert form of a passenger.

The poor fellow was obviously in a very bad way, as occasionally he would open his eyes and attempt to raise his head, only to slip back into unconsciousness.

Seasickness? Air-sickness!

In that instant, we lost interest in aerial travel, in Bogota, and in the whole of Colombia. No hydroplanes for us, and river steamers *tampoco!* Reading consternation in our faces, Herr Behr stepped forward and questioned the pilot and then returned to explain that the passenger was seriously ill when put aboard the plane at some fever-ridden up-river camp; and that he had been rushed to Barranquilla in an effort to save his life.

"Then he is not suffering from air-sickness?"

"No; something far more serious."

Fare by Weight

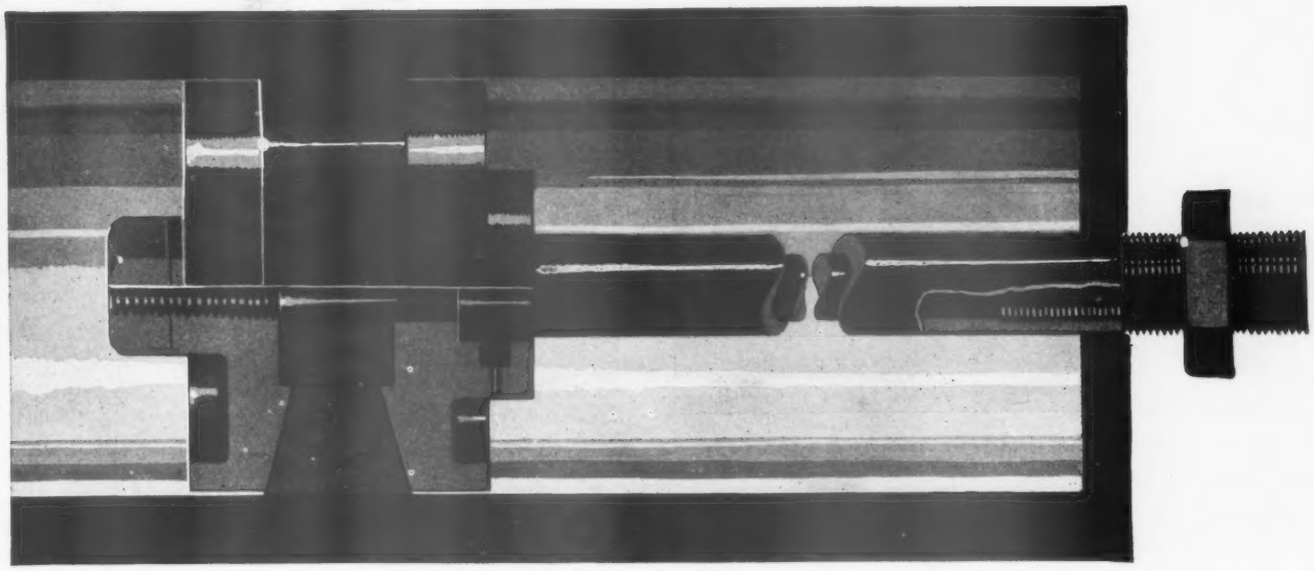
At five o'clock on the appointed morning, the Scadta bus called at the hotel, and we were transported again to the air-port, where we were "weighed in," bag and baggage, very much like jockeys entering the Derby. Those of us who were over-weight had to pay extra, and extra charges were imposed on all baggage in excess of ten kilos. Then, the station master busied himself with totalling up and dividing the load into equal parts, as two planes were scheduled for the southward flight on that day.

On such occasions, one is likely to be very critical of those to whom he feels he is entrusting his life, and we were very pleased to observe that the organization seemed to function smoothly and efficiently. The attitude and actions of the pilots and other members of the German organization is calculated to inspire confidence. The pilots all speak English, as well as Spanish; and they go out of their way to make every passenger feel at ease, as well as to answer the numerous questions which land-lubbers and groundlings put to them day after day, never betraying that perhaps they have heard each question hundreds of times before.

In a courteous but most matter of fact manner, we were instructed to take our seats. The motor having already been warmed up, the pilot threaded his way out the mouth of a small *cano* onto the broad expanse of the Magdalena. Heading upstream, he opened his throttle and we gained speed very quickly. The going became a bit rough, as the pontoons bounced over the water, but it was not unlike riding in a fast motor-boat, and we decided

River steamers stranded on sand-bar near Puerto Berrio, Colombia. When the river is low it sometimes takes three weeks or more to go from Barranquilla to Girardot, a trip which the 'plane makes in a few hours. Photo by "Scadta"

Andes Mountains in the Department of Santander, Colombia. Photo courtesy of "Scadta"



Put *Pep* into your MUD with "BJ" *Pep Pistons*

When pumping mud against high gas pressure the **BJ** Pep Piston is especially desirable. It will not leak when heavily loaded. The same amount of expansion is maintained regardless of the pressure in the well—and this expansion is positive. The sleeve expands the rubber, giving an automatic action. The **BJ** Pep Piston can be adjusted and tightened without taking the head off of the pump. You simply tighten the sleeve.

The mud can't leak through the rod. A rubber seal packs between the sleeve and follower.

The head plate screws onto the rod by a tapered thread and locked by a lock-nut at the end of the rod.

The expanding rings are genuine Bettis rubber—the same high quality that has made such a phenomenal success in Bettis Protectors.

"Use a BJ and get a Better Job"

BYRON JACKSON CO.
OIL TOOL DIVISION
2150 E. Slauson Avenue, Los Angeles, California

Tulsa, Okla. *(Warehouse)*
214 E. Brady St.

Fort Worth, Texas
814 Dan Waggoner Bldg.

Houston, Texas
1915 Post Dispatch Bldg.

New York City
1245 Graybar Building

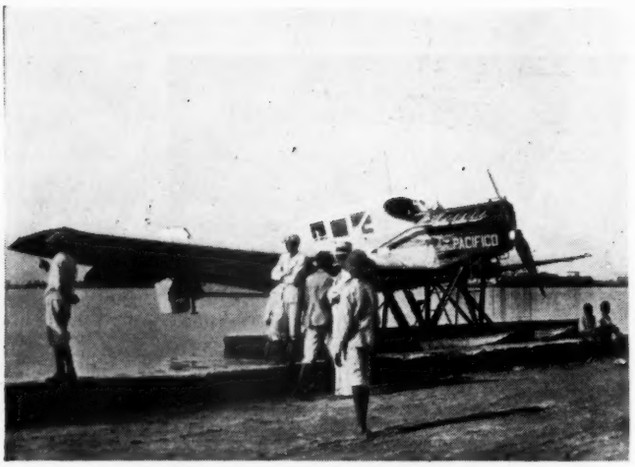
BYRON JACKSON CO.

PRODUCTS:

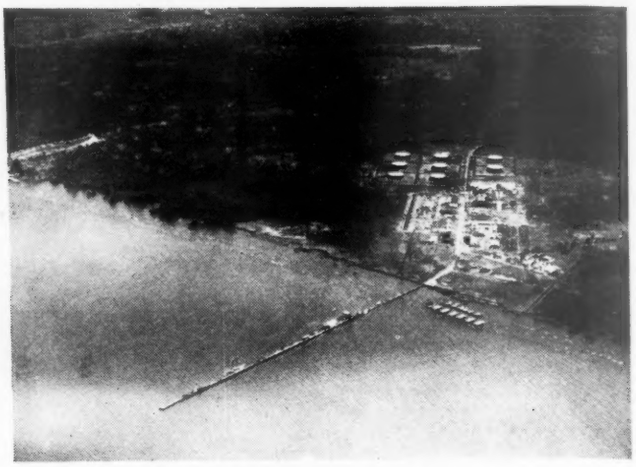
Elevators, Tongs, Disc Bits,
Tool Joints and Collars,
Underreamers,
Tubing Catchers, Tubing Bleeders,
Tubing Stops, Tool Braces,

Rotary Drive Bushings, Hooks,
Slush Pump Pistons and
Valves, Circulating
Heads, Subs, Cones, Side
Reamers, Pump Liner

Pullers
Valve Seat Pullers,
Flow Nipples,
Centrifugal and Turbine
Pumps for all uses



Junkers passenger plane of the type used by the Sociedad Colombo-Alemana de Transportes Aereos. Photo by "Scadta"



Caribbean Petroleum Company's topping plant, San Lorenzo, Venezuela. Photo by "Scadta"

to postpone the feeling of fear until actually in the air.

The fast-receding water-front engaged our attention for a moment, during which the rough jolting of the ship ceased, and before we knew it we were flying with both feet off the ground, in the words of James Warner Bellah. Too late to be scared now! And, besides, what is there to be afraid of? A far greater feeling of uncertainty is to be derived from riding in an automobile at 40 or 45 miles an hour.

Gradually and almost imperceptibly we gained altitude, as the pilot found it advisable to climb above the morning mists rising from the river, and, in proportion to our height, we lost the sensation of speed with which we had been impressed at water-level. There, houses, trees, and other land-marks viewed at short range seemed to flash by in a blur of speed, but up in the air, we seemed just to be floating along, as land-marks seen at greater distances remained within our range of vision for longer periods.

As the ascending plane threaded its way through the rising mists, its wings sometimes struck mist-clouds, with resulting bumps not unlike those caused when automobile wheels strike rocks in the road. On the whole, there were very few and very slight disturbances of our equilibrium, and we soon found ourselves floating along peacefully and at ease above great white cloud banks, for all the world like drifting snow.

At that stage of our flight, the clouds obscured our vision in all lateral directions; but, except at rare intervals when we passed over drifting mists, we could always see the ground and the muddy, winding river below. At first, grazing cattle appeared to be about as big as sheep. Then, as we mounted higher, they seemed to grow smaller. Later in the day, when the pilot climbed high above a winding tortuous passage in the river, they seemed no larger than rabbits.

However, as soon as the sun rose and dissipated the morning mists, the pilot dropped back to lower levels. His is strictly a business proposition; and he does not waste gasoline on unnecessary altitude. There is no stunting, no cavorting in high air. Two or more Scadta planes fly the entire navigable length of the Magdalena River every day in the year; and the pilots are no more permitted to do stunts than are the engineers on the Twentieth Century Limited.

Follow River

Obviously, a speeding hydroplane cannot make all the abrupt twists, reverses, and S-curves of the winding Magdalena, but the pilots remain always within gliding distance of its smooth surface. In the course of a year, they might save many miles, many hours of time, and many gallons of gasoline by striking straight air-line course to their points of destination, but that would involve the risk of landing in a forest or on a mountain-side with a plane equipped only for alighting on the water, so it is not done.

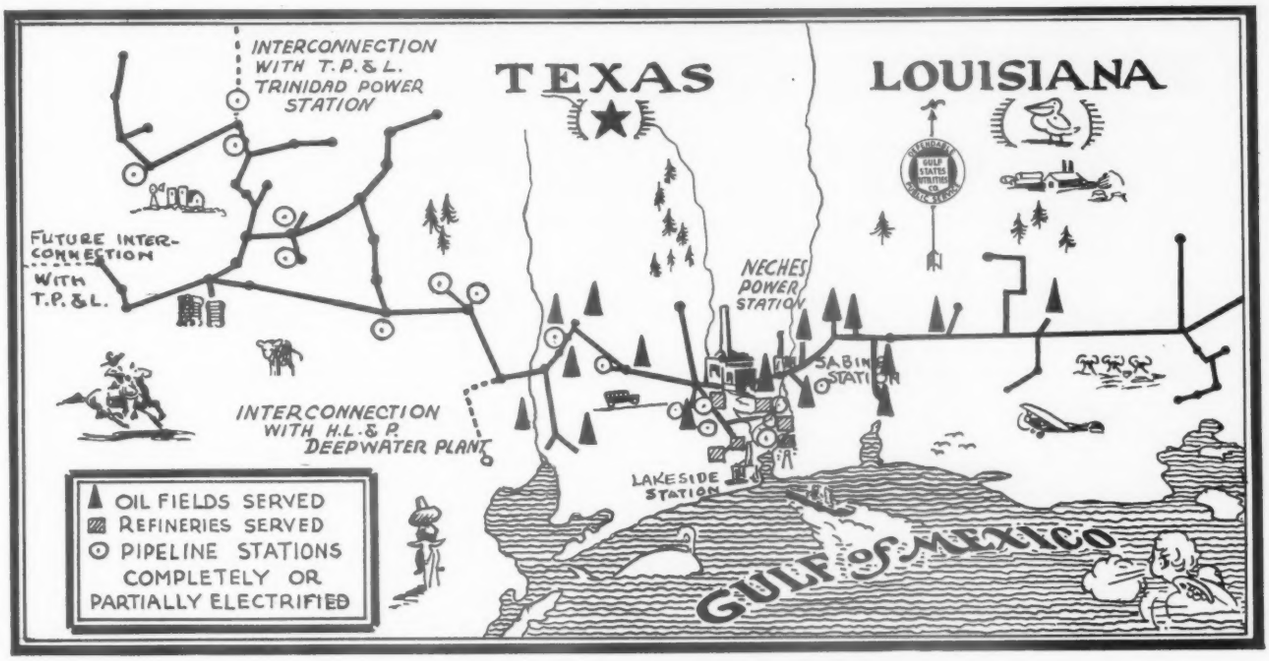
We had read about "air-pockets" and "bumpy air"; but we did not strike any worthy of notice, and certainly none sufficient to cause seasickness. True, we noticed that the horizontal level of the wings was slightly disturbed on infrequent occasions, and once in a while we observed slight variations in the buoyancy of the air, due to rising currents and differences of temperature. A more disturbing sensation is to be had from riding in an express elevator in one of the big buildings of New York or Houston, so there was nothing to worry about on that account. During the heat of the day, and while passing over a straight stretch of the river between Barranca Bermeja and Puerto Berrio, the pilot dropped down to within a very few feet of the water level, explaining later that the water afforded a sort of unyielding cushion supporting

(Continued on page 122)

Tropical Oil Company's camp near Barranca Bermeja, Colombia. Photo courtesy of "Scadta"

Another view of the Tropical Oil Company's refinery near Barranca Bermeja, Colombia. Photo by "Scadta"

ELECTRIC POWER PREFERRED



The use of Central Station Electric Power has steadily increased and a number of extensions to the present system are planned to serve the industry even more completely in this territory.

Gulf States Utilities Company

Beaumont, Texas Lake Charles, La.

UNDER EXECUTIVE MANAGEMENT OF STONE & WEBSTER INC.

NATURAL GAS DEVELOPMENT *in the* SOUTHWEST

By KENT RIDLEY

RAPID development of natural gas resources in the Southwest during recent years has been characteristic of the section. Criticism of some outsiders to the contrary, the Southwest has a way of doing big things in a big way and doing them promptly, once the work has been outlined. An instance of this is seen in the growth during the last few years of the United Gas Company, under Moody-Seagraves management, which is reviewed in some detail in pages which follow.

Centering at Houston, gas has been brought from two gas areas of such known magnitude as to justify construction of the long lines required. The length of these systems of high pressure mains in themselves presents an interesting engineering study, and the character of country crossed makes details of construction of vital interest of line builders who have problems of that nature to overcome. Only assurance of dependable supply in the fields and large and growing demand for fuel would justify the investments involved, and both of these are in evidence.

This natural gas development in the Southwest has not only been of great economic benefit to industry, but also has had an important bearing upon the much talked-of conservation of oil. The industrial districts of the Houston and Beaumont-Port Arthur areas have been dependent upon oil for fuel until the advent of natural gas supplies. Cheaper fuel supplied by the latter has resulted in a stimulation of industrial growth in the areas involved and at the same time has added some millions of barrels of oil to the world's reserve. Addition of natural gas for industrial boilers has materially increased the attractiveness of the Texas ports from Orange to Corpus Christi for the location of plants, as has been shown by location in these areas of additional large users of fuel within recent months. This circumstance, together with the fact that the original demand at the time the lines were laid made these long installations profitable, assures a profitable future for the natural gas industry along the Texas coast.

Climatic conditions and the fact that the volume of gas used in industry is relatively so much greater than the domestic demand, have served to remove the peak and slack demand generally associated with the distribution of natural gas, thus adding to the profit of supplying this commodity in the Gulf Coast country.

The same physical obstacles which had to be overcome in the construction of the long lines across South and East Texas have presented opportunity to display in a major sense that spirit of service which is an essential part of supplying gas dependably. Not only have lines been run to fields in different directions and connected into a common system, but safeguards have been made to insure uninterrupted service. Gas for the entire system, in emergency, can be had from either of two sources. In addition to careful construction to insure strength at points of danger, all river crossings have multiple lines so manifolded that another pipe is available in event of a break in time of flood. This engineering, together with overcoming every type of obstacle that is to be met in laying pipe over level country, including wooded swamps, sandy wastes and arms of the sea, make the accompanying articles of interest to those engaged in pipe line construction.

In welding together a group of companies, each unit having a definite part in producing, transporting and distributing to industrial and domestic consumers, the Moody-Seagraves organization has proven efficient. This gathering together of financial force and putting it into operation with so little delay is an accomplishment comparative to constructing and putting the gas distributing system in operation.

The story of the organization of the United Gas Company and the details of its several production, transportation and distribution projects, should, we believe prove of interest to more than justify the additional expense of having staff writers visit the entire system to prepare the articles which, on succeeding pages of this issue, give all the pertinent details. It is presented not only from the broad interest of an industrial organization of such importance, but also for the benefit knowledge of construction details will be to the natural gas industry at large.

Loop construction on 12-inch line south of San Antonio

United Gas Company Has Rapid Growth in Southwest

By WM. V. GROSS
Staff Representative

SINCE the time it was chartered in Delaware, about one year ago, United Gas Company has grown to be one of the largest natural gas distributors and gatherers in the world. If expressed in diameter equivalents of three-inch pipe, its gathering and distribution lines would reach a distance of nearly 5,000 miles. This amount includes lines operated by United Gas Company proper or by subsidiaries controlled by it. The lines form a network throughout Southwest Texas, South Texas of the Gulf Coast region, East Texas and Western Louisiana.

Above figures do not include miscellaneous lease lines and city mains serving industrial and domestic consumers

Paint gang painting 16-inch coupling near Clinton

Another view of construction of Southern Gas Company's line south of San Antonio

of the company nor of its subsidiaries, but only the principal gathering and transportation systems. These systems, expressed in pipe diameters and mileage, are tabulated below:

Diameter of pipe	Mileage	Miles in Three-inch Equivalent
22-inch	138.7	1,016.67
18-inch	76.4	458.40
16-inch	209.4	1,116.10
14-inch	61.6	287.06
12-inch	208.2	832.80
10¾-inch	30.0	107.49
10-inch	54.4	181.15
8-inch	225.6	600.10
6-inch	106.9	213.80
4-inch	71.9	94.56
3-inch	9.1	9.10
2-inch	24.0	16.00
Totals	1,215.4	4.933.23

West Texas Supply

Fuel for the lines either produced by United Gas Company, its subsidiaries or is bought from unaffiliated operators. Principal sources of natural gas utilized by the company are located in five regions: Laredo district, San Antonio region, Coastal Texas and East Texas. Northwest Louisiana gas fields also contribute to United Gas Company's supply of natural gas.

In West Texas, or the Laredo district, United Gas Company utilizes six active sources of natural gas, exclusive of those properties it holds in reserve. Most of the gathering in this district is done through two subsidiaries, South Texas Gas Company and Southern Gas Company.

South Texas Gas Company has a line tapping Reiser field and supplying contiguous territory. This field is in Webb County, about 25 miles east of Laredo. Jennings pool, a major factor in natural gas supply of Texas located in Zapata County, is served by a line of the South Texas Gas Company which connects it with the main leading into Carolina-Texas field from Laredo. The same company taps Carolina-Texas gas field with a 12-inch line. Southern Gas Company also draws on Carolina-Texas field for part of its supply of natural gas. Both companies draw on Cole field, also in Webb County, for natural gas. Aviator pool, seven miles south of Carolina-Texas gas field is served by a line of the South Texas Gas Company. Andrews Petroleum Company's pool, located midway between Mirando Valley and Aviator pool, furnishes gas to one of the smaller lines of South Texas Gas Company.

Gas fields in Laredo district in all instances have shown economic results as oil fields also.

San Antonio District Supply

Natural gas supply sources of United Gas Company in San Antonio district, comprising Medina, the northwestern tip of San Patricio, Liveoak and McMullen Counties, are drawn on principally by Southern Gas Company and Southern Gas Utilities Company, both subsidiary companies.

Southern Gas Company has a lateral 10-inch lateral line running down from Callahan Junction on the border line between McMullen and Liveoak Counties to Mathis field, located in the northwestern tip of San Patricio County. En route Mathis field from Callaham Junction, the line taps Lucas field, located in southeastern Liveoak County.

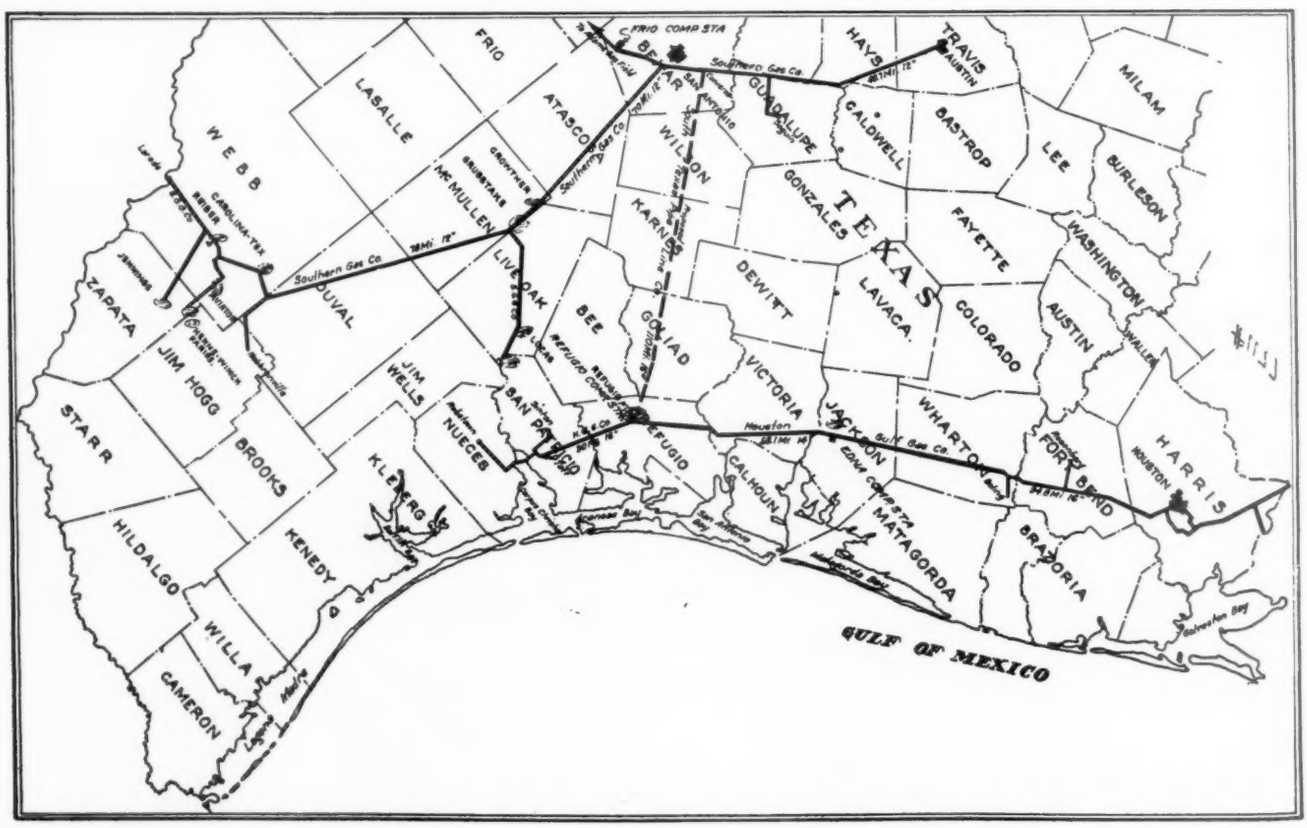
About 40 miles west of San Antonio, in Medina County, is Adams gas field. Gas from this field is utilized for lines and distribution of Southern Gas Utilities Company.

Situated convenient to the San Antonio system of lines and to the United Gas Company's Gulf Coast systems are important reserve areas which have not been identified yet with either system.

San Antonio-Coastal Reserves

In this area five successful gas wells have been completed by a subsidiary of United Gas Company. These wells stand shut in. Their rock pressure is 850 pounds. Houston Oil Company is already making use of gas coming from Agua Dulce, having laid a three-inch line to the field.

Another valuable natural gas reserve owned by the company is composed of its holdings in Pettus field, located in northern Bee County. Rock pressure on the discovery well, which is owned



Showing Refugio to Houston section of United Gas Company's transmission lines and also a portion of the San Antonio and Laredo district sections.

by United Gas Company, stands at 1200 pounds. The company has no line into Pettus field, as it is being held as a reserve, but it is only 10 miles from the company's proposed line which contemplates running from Refugio to San Antonio.

Supply of natural gas for United Gas Company's main line paralleling the coast of the Gulf of Mexico comes from three fields located in the adjoining counties of Refugio and San Patricio. Refugio field, which is one of the company's greatest source in the Gulf Coast country, is located in western central Refugio County. This field, which has seven known productive gas sands and an estimated potential storage of 200 billion cubic feet of gas, is one terminus of Houston Gulf Gas Company's main line from Refugio to its compressor station at Edna, Texas. The seven sands mentioned above do not include recently found high pressure sands which are below them.

Houston Gulf Gas Company has a contract with Saxet Oil Company for purchase of gas produced in White Point field, located in south central San Patricio County. It has a line running to the field. Likewise the Saxet field, lying four miles south of White Point furnishes a source of Houston Gulf Gas Company's supply of natural gas through a contract this company has with Saxet Gas Company. Saxet gas field is on the southern shore of Nueces bay, near Corpus Christi.

Esperson Building, Houston, Texas. Home of General Office of United Gas Company

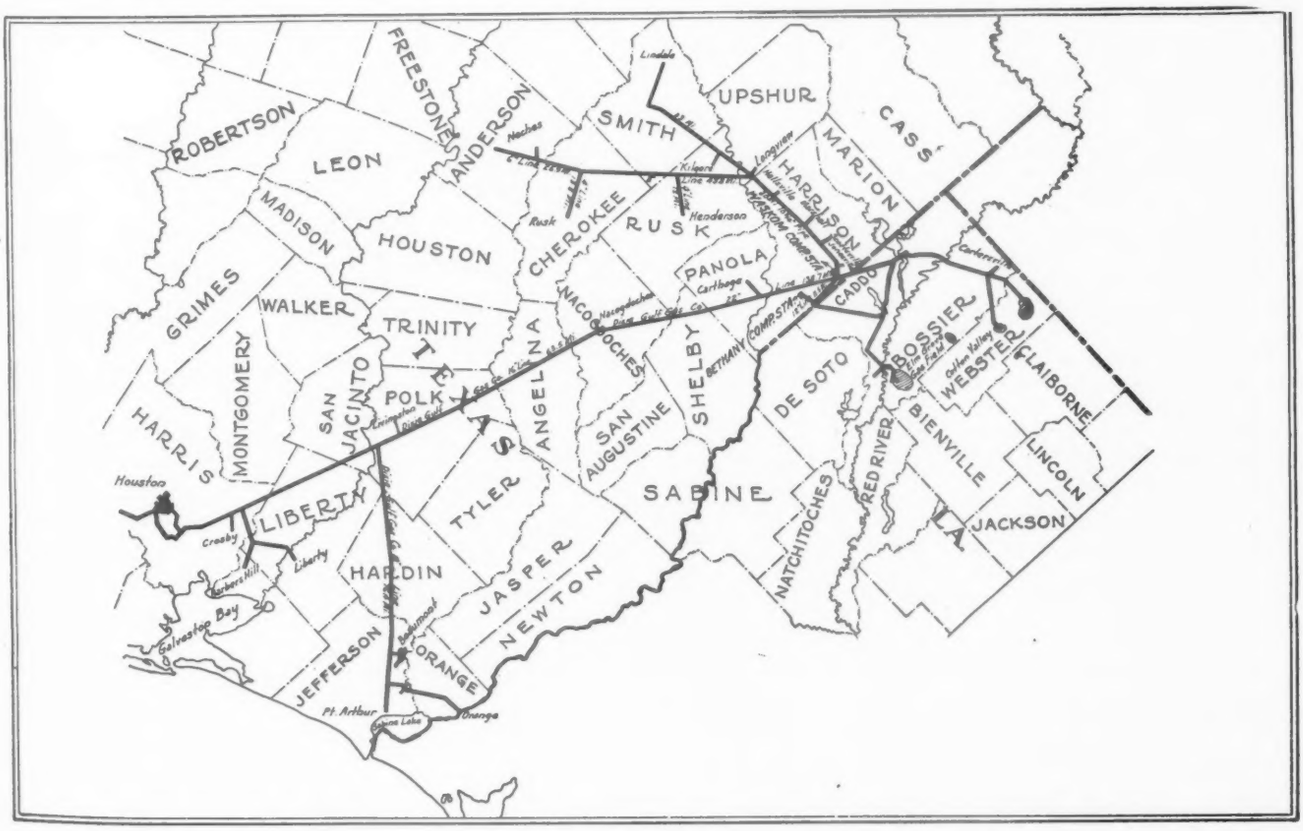
East Texas-Northwest Louisiana Sources

Leaving the Gulf Coast of Texas, the United Gas Company is very active in developing and exploiting gas sources in East Texas and Northwest Louisiana. Gathering lines of the company in these areas are operated through two subsidiaries, Dixie Gulf Gas Company and Dixie Gas and Utilities Company. Where the company does not have a line leading into these fields, it purchases gas from companies which do.

Carterville gas field, Bossier Parish, Louisiana, is tapped by one of the lines controlled by United Gas Company. This field has a present controlled production of five million cubic feet per day. Cotton Valley field, with a present daily controlled production of eight million cubic feet per day, furnishes natural gas for the company's mains. This field is located in Webster Parish, Louisiana, and gas from it is piped through Natural Reserve Gas Company's mains to United Gas Company's Waskom, Texas, compressor station. Greenwood field, in Caddo Parish, with a present controlled production of 12,000,000 cubic feet per day, furnishes another source of supply.

In East Texas, Bethany gas field, located in the heart of Jaybird Thicket, Panola County and having a daily productive capacity of 20 million cubic feet per day, is served with a gathering line running to the company's compressor station at Waskom. Waskom gas field, near Waskom, Texas, has an estimated daily production in excess of 12 million cubic feet per day.

Summing up the organization's sources of supply in Texas and Louisi-



Showing United Gas Company's network of lines in northwest Louisiana and East Texas and the Orange section also.

ana by districts, the following tabulation occurs:

West Texas District	San Antonio District
Reiser field	Mathis field
Jennings	Lucas
Carolina-Texas	Adams
Aviator	Grubstake
Cole	Crowther
Gulf Coast District	**East Texas North Louisiana District**
Refugio field	Carterville field
White Point	Cotton Valley
Saxet	Greenwood
Agua Dulce	Bethany
Pettus	Waskom

Out of the above 20 sources for natural gas for United Gas Company's mains, 18 are being used. The remaining two are held in reserve. One field is not mentioned in the above table because it still is only a minor source of supply for the company. That field is the Andrews Petroleum field, lying between Aviator field and Miranda Valley.

At present there are four great systems of gathering and distributing lines utilizing gas produced in 19 of United Gas Company's sources. These systems may be referred to as:

1. San Antonio system, serving West Texas and the San Antonio district.
2. White Point to Houston, running along the Gulf Coast of Texas and serving some small towns along the line.
3. Houston to Waskom system, serving industrial and domestic consumers along this line and branching off at Goodrich Station to Port Arthur and Orange.
4. East-Texas and North Louisiana system, serving certain municipalities and industrial consumers in this district and gathering gas from fields located therein.

San Antonio System

The heart of the San Antonio gathering and distributing system of United Gas Company is the 143-mile, 12-inch line running from that city to fields located in the vicinity of Laredo.

Starting at the southwestern extremity of the San Antonio systhem, there is a six-inch line leading out of Laredo for 12.3 miles and running in the direction of Carolina-Texas field. The line is then stepped up to eight-inch, which runs for 20 miles. Five miles of 12-inch pipe complete the line from Laredo into Carolina-Texas field. Branching off the Laredo-Carolina-Texas line at a point about a mile west of Reiser field is a lateral of six and eight-inch line running to Jennings field in Zapata County. This line is 36.5 miles in length. Another lateral line from Mirando Valley to the main line between Laredo and Carolina-Texas field is made up of nine miles of six-inch and 6.6 miles of three-inch. The line joins the above main near Aguilares. The main line from San Antonio to this district taps Cole pool. Running in a southeasterly direction from Cole pool in Webb County is 12.9 miles of two-inch feeding domestic consumers in Hebbronville, Jim Hogg County.

A few miles above the middle of the eastern boundary of McMullen County, at Callaham Junction, 38 miles of 10-inch line branches off the main 12-inch in a southeasterly direction and terminates at Mathis field, near Mathis, in the northwestern corner of San Patricio County. This line passes through Lucas field. It is operated by the Southern Gas Company, a United Gas Company subsidiary.

North Section of San Antonio System

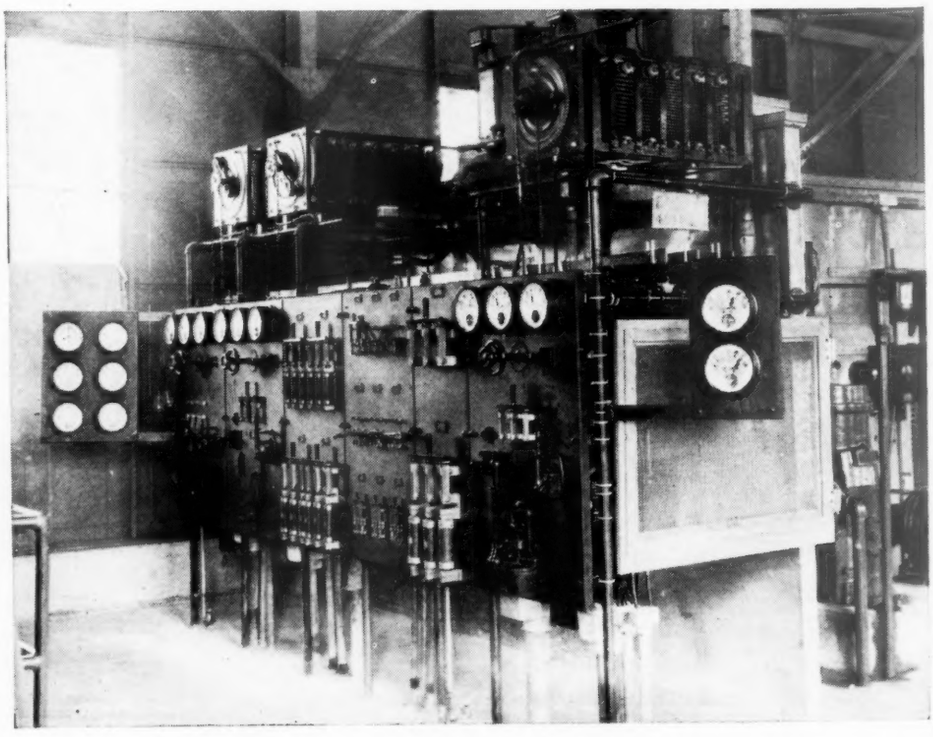
The north section of the San Antonio system of gathering and distributing lines starts at D'Hanis on the west and terminates at Austin. The line from D'Hanis to Adams gas field is composed of 22 miles of pipe, 11 miles of four-inch and 11 miles of six-inch, roughly. From Adams gas field to San Antonio is 40 miles of eight-inch pipe. This line passes through the Frio compressor station.

Running northeast from San Antonio to New Braunfels is 39 miles of eight-inch pipe. At this point the size of the line is increased to 12-inch and continued to Austin, in Travis County, a distance of 47.7 miles. From a point just west of New Braunfels on the line between San Antonio and Austin, a branch line of eight-inch pipe extends 12 miles in a southeasterly direction and terminates at Seguin.

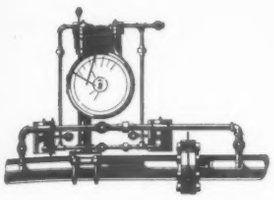
Sections of the San Antonio system of United Gas Company, operated by Southern Gas Company, Southern Gas Utilities Company and South Texas Gas Company, giving linear dimensions in miles and diameters in inches, appear in the following tabulation:

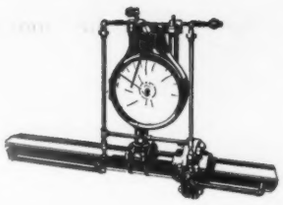
Length in miles	Diameter in inches	Description
143	12	Main line from San Antonio to Cole and Carolina-Texas fields.
38	10	Line starting at Mathis and running through Lucas to Callaham Junction on above main.
40	8	San Antonio to Adams gas field.
11	4	D'Hanis to Hondo.
11	6	Hondo to Adams gas field.
39	8	San Antonio to New Braunfels.
47.7	12	New Braunfels to Austin.
12	8	From point on main San Antonio - Austin line just west of New Braunfels to Seguin.
12.3	6	These three sections, beginning at Laredo with the six-inch and traveling eastward, make up the line reaching from Laredo to Carolina-Texas field.
20	8	
5	12	
18.3	6	Lateral lines from
18.2	8	Carolina-Texas pool to Jennings pool in Zapata County.
12.9	2	Cole pool on main line to Hebbronville.
6.6	3	Laterals Mirando to Aguilares.
9.0	6	Laterals from Mirando to Augilares.

Among the cities and towns served by the San Antonio system are San Antonio, New Braunfels, Seguin, Hon-



G. E. switchboard in auxiliary room, Waskom compressor station





United Gas Company Uses METRIC METERS For Accurate Measurement

1.—Westcott Meter measuring high pressure gas for Houston Gulf Gas Company.

2.—This meter is in service on low pressure intake at the Edna Compressor Station.

3.—A Fuel meter measuring the consumption of compressor engines for United Gas at Edna.

United Gas Company and all of its subsidiary producing companies are constant users of Westcott orifice meters throughout their vast operating domains. Accurate records, reliability, and economical service is demanded. This orifice meter, as always, meets such demands, giving something more valuable than just satisfactory service.

WESTCOTT & GREIS, INC.

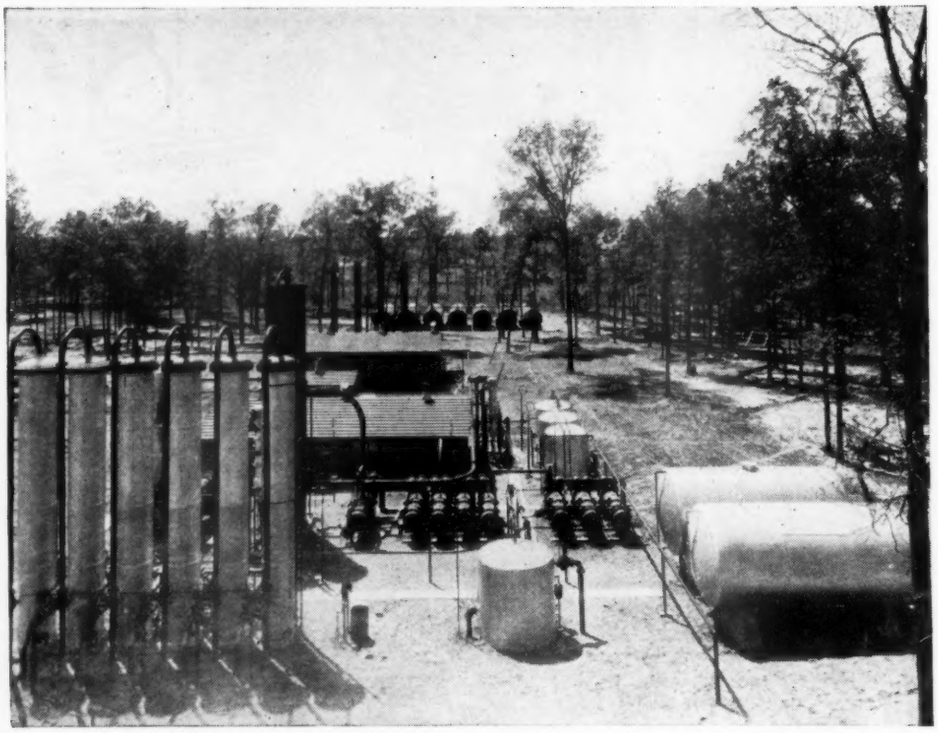
Sales Service

DALLAS HOUSTON TULSA LOS ANGELES

METRIC METAL WORKS

of the American Meter Company-Inc.

ERIE - PENNSYLVANIA - U-S-A



Braun absorption plant on company's Waskom lease which turns out grade "AA" gasoline.

do, Schirtz, LaCoste, D'Hanis, Austin, Laredo, Hebbronville, Bruni, Mirando City and Oilton.

White Point to Houston System

Second greatest of United Gas Company's trunk lines from a standpoint of capacity is perhaps the system feeding Houston from fields situated in San Patricio, Nueces and Refugio Counties, Texas. The line carries two compressor stations, Refugio and Edna. It is composed of three main sections: White Point to Refugio, Refugio to Edna, and Edna to Houston.

From Refugio to White Point, 30 miles of 16-inch pipe carry gas produced at White Point. Tapping the main line at White Point, the company has 13.8 miles of four-inch pipe delivering gas to Robstown. It runs another line from White Point to Sinton.

The second section of the Gulf Coast system consists of 58.1 miles of 14-inch pipe running from Refugio to Edna.

At Edna, the line is stepped up to 16-inch and carried 94.8 miles into Houston. In the eastern corner of Wharton County, 6.9 miles of 10-inch pipe feeds from the main to Boling dome, where the Union Sulphur Company's plant is supplied. There is also a small line branching off this section of the Gulf Coast system and running north to Rosenberg, in the central section of Fort Bend County.

Sections of the Gulf Coast system of gathering and distributing lines operated by Houston Gulf Gas Company, United Gas Company subsidiary, giving lengths and diameters, are shown in the following tabulation:

Length in miles	Diameter in inches	Description
30	16	Main gathering line from White Point gas field to Refugio compressor station.
58.1	14	Refugio compressor station to Edna compressor station.
94.8	16	Edna compressor station to Houston.
13.8	4	White Point to Robstown, Nueces County.
8.6	4	White Point to Sinton, San Patricio County.
6.9	10	Boling dome to main line between Edna and Houston.

As construction followed in the Gulf Coast system of United Gas Company lines is practically the same as that employed in all of its main gathering and distributing lines, exclusive of the city mains and domestic taps of these mains, a few details of that construction are given here.

Construction Details

Hope Engineering Company contracted to build the line from Refugio to Houston for Houston Gulf Gas Company, which, like the United Gas Company, is one of the Moody-Seagraves interests.

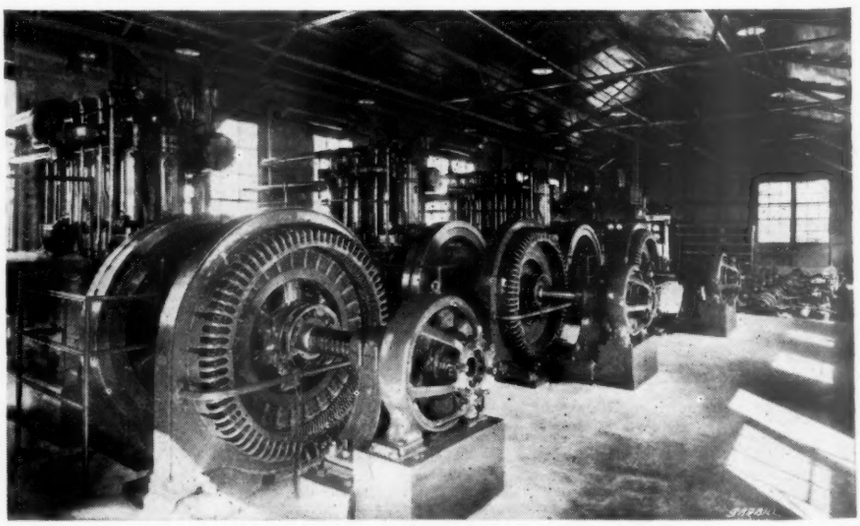
The line was tested upon completion to withstand a pressure of 400 pounds per square inch. No bend of more than 3½ degrees was made at any place in the main line. After the pipe was painted with an approved cold application of Ebonite to withstand rust and corrosion, it was buried in such a manner that the distance from the top of the pipe surface to the surface of the ground would be at least 24 inches.

Wherever rivers or streams were crossed the pipe was manifolded. Specifications called for manifolds of not less than 10 inches on sections of the line with a diameter of 14 inches for manifolds not less than 12 inches in diameter on sections composed of 16-inch pipe.

Pipe for major trunk lines was largely the product of A. O. Smith Corporation and Youngstown Sheet & Tube Company.

Territory through which a majority of the organization's main lines are laid is either flat or rolling prairie; hence, no drastic engineering methods were necessary to take care of expansion and contraction. The range of underground temperature was figured at 80 degrees as a maximum and 50 degrees as a minimum. Dresser couplings were used throughout to care for expansion and contraction.

In places where the pipe had to pass up-over-and down a hill, it was laid up



Hope engines, G. E. generators and Worthington pumps used in auxiliary house of compressor plant at Waskom

IN THE GULF COAST COUNTRY

Taming a wild gas well at Raccoon Bend

WILD GAS WELLS, WIND STORMS, RUST CORROSION and BAD LOCATIONS

make it tough for any oil producer and here too

IDECO DERRICKS

have long proven their unquestioned superiority.

. . . Whether used as a single unit or with reenforcing—there is an IDECO Derrick of proper size and capacity to meet any requirements . . . Greater strength, with from 30% to 60% less parts, completely galvanized, affording full rust protection, ease of erection and the comforting assurance of safety and dependability under all circumstances mean a great deal to those who use them.

It's economy to use the best

International Derrick & Equipment Company

Columbus, Ohio Los Angeles, Calif.

Houston, Texas

Plants: Columbus, Delaware, Ohio; Torrance, California; *Sales Offices:* Columbus, Ohio; New York City, N. Y.; Detroit, Michigan; Dallas, Texas; Wichita, Kansas; Los Angeles, California; Maracaibo, Venezuela. *Warehouses and Yards:* Columbus, Ohio; Tulsa, Seminole, Tonkawa, Drumright, Okemah, Wewoka, Maud, Sasakwa, Allen, Earlsboro, Oklahoma City, Oklahoma; El Dorado, Wichita Heights, Kansas; Bakersfield, Taft, Torrance, California; Houston, Hebbronville, Big Spring, Merkel, Odessa, Pyote, Pampa, Borger, McLean, Mexia, Luling, Texas; Shreveport, Lake Charles, Louisiana; El Dorado, Smackover, Arkansas.

Export Representation—74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, Calif.

the hill to a point well past the place which marked the end of the greatest angle of inclination. Then, instead of proceeding with the line in the direction it was destined to go, it was laid backwards up the side of the hill on what normally would have been the decline side and joined to the above mentioned section. No particular attempt was made to choose warm weather for construction work on the line, as temperature extremes were not considered wide enough apart in the Gulf Coast country to interfere seriously with the efficiency of the policy of using Dresser couplings with the Smith pipe.

Houston to Waskom System

The Houston to Waskom, Texas, system of the company's line is operated by Dixie Gulf Gas Company and consists primarily of three sections: Houston to Goodrich Station, Goodrich Station down to Beaumont and Port Arthur, Goodrich Station to Waskom.

From Houston to Goodrich Station the company has 63.5 miles of 16-inch pipe. From there on to Waskom the line is stepped up to 22-inch. This latter distance is 138.7 miles. At Goodrich Station the line branches off in a southerly direction for 76.4 miles to Beaumont district. This line is composed of 18-inch pipe.

Just east of Houston on the Houston-Goodrich Station section of the main line, seven miles of four-inch pipe taps the main line from Crosby in Harris County. A few miles east of this tap is another line of six-inch pipe running down to Liberty oil field and Barbers Hill. The line at Liberty field is tapped by two miles of six-inch pipe running to Liberty proper. There also is one mile of six-inch tap line running to the town of Dayton. Liberty and Dayton are located in Liberty County, while Barbers Hill is in Chambers County. The above taps for Liberty and Barbers Hill are joined to the southern end of the tap on the main line. This tap is made up of 9.5 miles of 10-inch and 10 miles of six-inch pipe.

Goodrich Station-Beaumont Section

There is a line branching off the main line from Goodrich Station to Port Arthur which runs over to Orange, Texas. This line is laid in three sections and is operated by the Dixie Gas and Fuel Company, another United Gas Company subsidiary. The line is made up of 3.4 miles of 16-inch, 3.5 miles of 14-inch and 12.5 miles of eight-inch pipe. Along this line are located refineries operated by the Pure Oil Company and The Texas Company. There is one mile of 12-inch tapping the main between Orange and the Goodrich Station-Port Arthur main, while nearly two miles of 8-inch tap the line in the same vicinity to furnish fuel for Pure Oil Company's refinery. The 12-inch tap line serves The Texas Company's refinery. On the Goodrich Station to Waskom section of the system there are three minor tap lines feeding Livingston, Polk County; Nacogdoches, Nacogdoches County, and Carthage in Panola County. Livingston tap line consists of 1¼ miles of two-inch; the Nacogdoches tap consists of 2.4 miles of four-inch pipe, and the Carthage tap line consists of 3.9 miles of two-inch pipe.

Following are line specifications, approximate, for the Houston to Waskom system, including the Beaumont-Orange section:

Length in miles	Diameter in inches	Description
63.5	16	Houston to Goodrich Station, Polk County.
138.7	22	Goodrich Station to Waskom, Harrison County.
76.4	18	Goodrich Station to Beaumont and Port Arthur.
1.0	12	Texas Company tap on Beaumont - Orange main.
1.8	8	Pure Oil Company tap on same.
3.4	16	Line from Orange to Port Arthur-Goodrich Station main line. Laid in three sections.
3.5	14	
12.5	8	
9.5	10	Main line to Bargers Hill.
10.0	6	Main line to Barbers Hill.
12.0	6	Liberty tap to main running to Barbers Hill.
2.0	6	Tap running from Liberty field to Liberty proper.
1.0	6	Tap running from Liberty field line to Dayton.
7.0	4	Crosby tap to Houston - Goodrich Station main.
1.4	2	Livingston tap to same.
2.4	4	Nacogdoches tap line on same.
3.9	2	Carthage tap on same line.

With the exception of the Orange line running over to the main line between Goodrich Station and Port Arthur, all the Houston to Waskom system of lines is under jurisdiction of Dixie Gulf Gas Company.

East Texas-West Louisiana System

In point of pipe line mileage—not in three-inch diameter equivalents—the East Texas-West Louisiana system of United Gas Company is perhaps the largest system of the company's entire network. Exclusive of city mains, the gathering and distributing lines alone require 211.6 miles of pipe. This ranges from 16-inch pipe to two-inch.

From Waskom compressor station to Longview, Texas, the company has 30 miles of 10¾-inch pipe. There are five taps on this line. Going along the main line from Waskom toward Longview, the first tap is that leading to Jonesville. It is composed of 1.3 miles of two-inch pipe. A few miles on up the line is another two-inch tap leading 4.5 miles to Scottsville. About midway between Waskom and Longview the line is tapped by a six-inch line leading into Marshall, four miles northeast. Hallsville, between Marshall and Longview has a four-inch tap 2.5 miles long connecting with the main. All the above taps on the Longview-Waskom main are located in Harrison County. The Longview city tap is composed of 1.5 miles of six-inch pipe.

At Longview the line forms a Y, one branch of eight-inch pipe running 33 miles in a northwesterly direction to Lindale and the other branch running west to Neches. The Lindale branch in the northern corner of Rusk County is topped by 2.5 miles of three-inch pipe feeding Kilgore.

The other branch line leaves Longview, running a general westerly direction and, a little south, to Jacksonville. This eight-inch line is 45.8 miles long. At Jacksonville it is stepped down to six-inch line and projected 25.9 miles to Palestine. At Jacksonville there is a southeasterly tap line on the main running 13.8 miles to Rusk in Cherokee County. This tap is four-inch line. About midway between Jacksonville and Palestine is another tap of eight-inch line connecting Boggy Creek with the main in Anderson County. The Boggy Creek line is 3.2 miles long. Between Longview and Jacksonville, in the eastern edge of Rusk County, there is 12 miles of 4-inch pipe connecting Henderson with the Longview-Jacksonville main.

Larger lines around Waskom are principally gathering lines. The company has 11.5 miles of 12-inch pipe leading from Bethany field to its Waskom compressor station. Then there is a 16-inch line leading to Waskom from Moringsport. This line is 17.7 miles long.

While a great portion of the United Gas Company's supply of natural gas comes from fields located in the East Texas-West Louisiana district, it does not have lines running into all of them, but has thus far found it advisable in some instances to use other interests' lines for transportation of gas it gathers and distributes.

A tabulation of main gathering and distribution lines in the East Texas-West Louisiana section of the company's system follows:

Length in Miles	Diameter	Description
25.9	6	Palestine to Jacksonville.
45.8	8	Jacksonville to Longview Junction.
13.8	4	Rusk tap line to main at Jacksonville.
12.0	4	Henderson to Longview Junction.
33.0	8	Lindale to Longview Junction.
30.0	10¾	Longview to Waskom.
11.5	12	Bethany field to Waskom compressor station.
3.2	8	Boggy Creek to Jacksonville-Palestine main.
2.5	3	Kilgore to Lindale-Longview main.
1.5	6	Longview city tap.
2.5	4	Hallsville tap.
4.0	6	Marshall tap (indus.)
4.5	2	Scottsville tap.
1.3	2	Jonesville tap.
17.7.	16	Waskom to Moringsport.

SERVING THE GAS INDUSTRY

REPUBLIC

LINE PIPE & BLACK PIPE
⅛" to 16"—O. D.
Threaded and Coupled; Plain End.

POWELL

IRON & STEEL VALVES
All Sizes and Pressures

DRESSER

COUPLINGS, CLAMPS, SLEEVES

ALSO

Complete stocks of Drilling and Producing Machinery and Equipment
Located at points convenient for operators.

Republic Supply Company

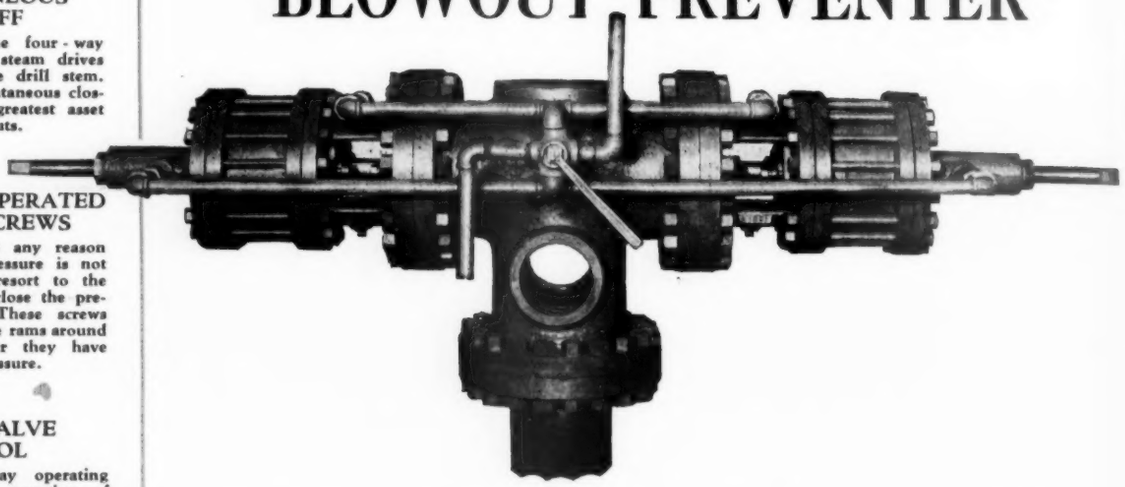
General Offices: Houston, Texas

OIL AND GAS WELL SUPPLIES
ROTARY AND CABLE TOOLS

8 POINT SUPERIORITY

CAM-IRON

STEAM-OPERATED BLOWOUT PREVENTER



REMOTE CONTROL

Permits installing four-way operating valve (by which the preventer is opened or closed) at a safe distance from your well.

INSTANTANEOUS SHUT-OFF

Upon opening the four-way operating valve the steam drives the rams around the drill stem. This gives you instantaneous closing which is your greatest asset in preventing blowouts.

MANUALLY OPERATED LOCKING SCREWS

In the event for any reason your operating pressure is not available you can resort to the locking screws and close the preventer manually. These screws also serve to lock the rams around the drill stem after they have been closed by pressure.

SINGLE VALVE CONTROL

A single four-way operating valve controls the operation of the preventer. A quarter turn closes it and a quarter turn in the opposite direction opens it. Simple and fool proof.

FLANGED CONNECTION

All steam operated preventers are connected to a casing by a flange. The flange is securely bolted and packed to prevent leaking. This flange permits easy installation of the preventer to the well.

CIRCLE OF STEEL

When the rams are closed they form a complete circle of steel around the drill stem. The top and bottom of the rams are machined to give a flat surface for the couplings or tool joints of the drill pipe. The packing in the rams completely incircles the drill stem and prevents leaking.

MECHANICALLY OPERATED

Steam or other pressure available may be used to operate the preventer. It is only necessary to operate one valve and your preventer *mechanically* opens or closes.

2,500 LBS. TEST

Before leaving the factory each and every C.I.W. steam operated blowout preventer is rigidly tested and guaranteed to withstand 2500 lbs. pressure per square inch.

DEFINITELY PREVENTS BLOWOUTS

When you have equipped your well with this new preventer you are guaranteed immunity from Blowouts. The speed and ease with which it is closed, and the super-strength with which it holds, makes it the most powerful and certain means you can employ to prevent a disastrous blowout.

The new steam operated preventer is being extensively used in fields the world-over, with the greatest of success. All report that it functions perfectly, under all conditions. Use them on all your wells.

CAMERON
IRON WORKS
Manufacturers of Oil Well Supplies and Fishing Tools
HOUSTON, TEXAS

ERON WORKS

5 EXCLUSIVE FEATURES

TUBING CONTROL HEAD

Run Tubing Under Pressure Without Killing Your Wells

By using two C-I-W Tubing Control Heads, as pictured above, it is possible to run tubing against a pressure of 400 to 2000 pounds, without killing the well. This is accomplished by means of a snubbing device which forces the tubing down against the pressure. When a coupling reaches the upper control head the rams are backed off to allow passage, while those in the lower control head are released just enough to allow passage of tubing without pressure escaping.

When the coupling has passed the upper preventer the rams are closed and those in the lower control head opened, and the same method is followed as on passing the upper control head. In this manner you do not risk losing your well as sometimes is the case when they are killed to run tubing.

PERFECT PACKING

A special C-I-W Patented Packing is laid along the sides, around the back and across the concave faces of the rams. It is inlaid in grooves cut in the solid steel rams, and when the rams are closed the tubing is doubly packed off. This is the same packing as used in both types of our heavy duty Blowout Preventers. Tested and proven over a period of eight years.

SWIFT AND CERTAIN CLOSING

A double closing arrangement is provided on the rams. Lever Jacks which are connected to the rods by machined teeth are used principally for speed. Locking screws, to which may be connected long levers, provide a means of locking the rams around the tubing. In this manner your tubing is instantly packed or unpacked as you may desire.

MADE OF TOUGHEST STEEL

The main body of the control head is cast in one piece of toughest steel. The heads are made of a specially cast steel and bolted to the main body. They have a tongue and groove arrangement, and are also packed to prevent leaking at the connection.

FOUR HOOK-UPS POSSIBLE

The four hookups possible with the Tubing Control Head make its use on Flowing Wells, air and gas lift wells, gas wells and pumping wells entirely practical and satisfactory. You may change from one hookup to another *without the purchase of additional equipment.*

2,000 POUNDS PRESSURE

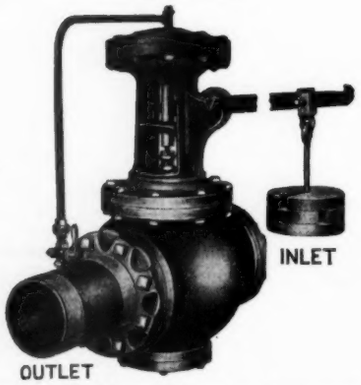
These heads are made in two sizes. One tested and guaranteed to withstand pressures of 750 lbs. per square inch and equipped with 2" flow line openings. The other, a heavy duty type, tested and guaranteed to withstand pressures up to 2000 lbs. per square inch and equipped with 3" flow line openings.

CAMERON
IRON WORKS
Manufacturers of Oil Well Supplies and Fishing Tools
HOUSTON, TEXAS

CF

FOR EVERY REGULATING PROBLEM

High Pressure or Reducing Regulator



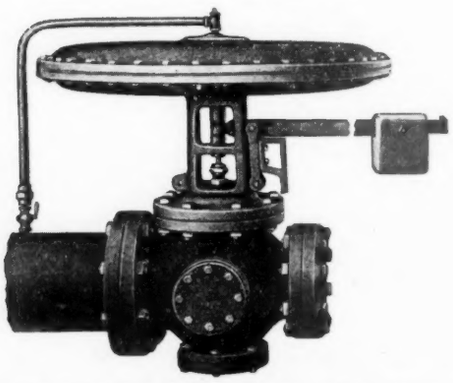
The function of this regulator, as its name implies, is to *reduce* the well or line pressure to such a number of pounds as may be safely handled by the Low Pressure Regulator.

We make High Pressure or Reducing Regulators for all these purposes and to withstand and control the highest pressures known; and have them in use where it reaches the enormous pressure of 2000 lbs. to the square inch. We can furnish these regulators for any inlet pressure, reducing to any given outlet pressure from 10 lbs. to 300 lbs.

Our regular line of High Pressure Regulators may be used on any inlet pressure up to 600 lbs. For higher pressures we make a special class of regulators.

Fulton Low Pressure Regulator

With Automatic Cut-off

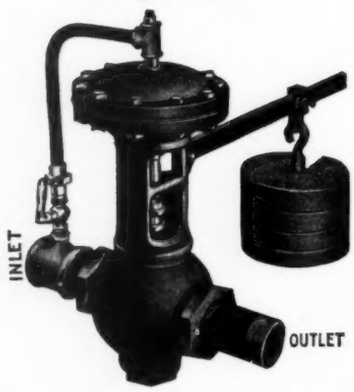


Low Pressure Regulators are so called because their function is to reduce the pressure in the service mains to a few ounces, or as low as may be convenient for safe and economical combustion.

As a matter of fact, they will reduce 100 lbs. to 4 ounces; but it is the general practice to reduce from one to fifty pounds on the high pressure side to a few ounces, or as many inches of water, on the low pressure side.

The automatic cut-off is attached to all low pressure regulators, without extra cost. It may be used on all sizes of our lever and weight type low pressure regulators where the outlet pressure is one pound or less.

Fulton Back or Check Pressure Regulator



The purpose of this regulator is to stop the flow of gas in a pipe line when the pressure falls to a given point. Sometimes it is desirable to stop the flow of gas in a line or system of gas lines when the pressure has fallen to a lower point than is considered advisable.

It is sometimes necessary to keep the pressure higher in one portion of a system of distributing lines that are so connected that the gas flows from one to the other, as in some cases where a gas well is discharging gas into the suction line of a pump.

Duplex Sensitive Gas Governors For Natural Gas

This regulator or governor is an improved form of our Duplex Sensitive Gas Governor, and is designed to meet the needs of artificial or natural gas companies, who desire to control a high and varying inlet pressure, and reduce it to a low and unvarying outlet pressure for illuminating or fuel purposes.

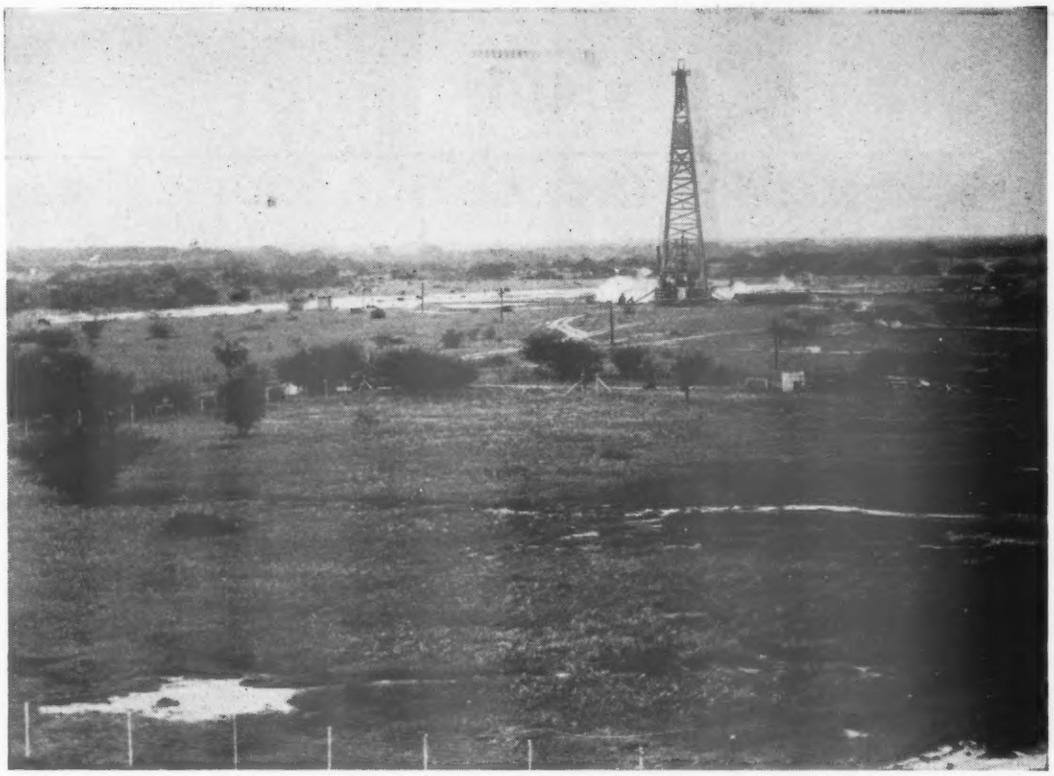
We believe that no gas governor ever offered to the trade can compare in respect to simplicity and accuracy with the Duplex Sensitive Governor. No accessories in the shape of auxiliary regulators complicate its operation.

Write for Catalogue

The Chaplin-Fulton Mfg. Co.

28-40 Penn Avenue Pittsburgh, Pa.

Organized 1884 — Oldest builders of regulators in the country. Built in all sizes from 1 to 24 inches; for all services 1 oz. up to 2000 lbs. pressure per square inch.



View of portion of Refugio gas field taken from compressor lease of Houston Gulf Gas Company

TEXAS *and* LOUISIANA FIELDS *Supply*

United Gas Company Lines

Company maintains four drilling subsidiaries operating on extensive leases in important southwestern fields

IN addition to buying gas from 18 fields located in Texas and Louisiana, United Gas Company operates through subsidiaries four drilling organizations which are producing natural gas in eight fields.

A brief account of each drilling organization, together with a tabulation of its activities and a description of territories in which it operates may present an idea of how these affiliated companies are increasing the proportion of gas produced to that distributed.

In fields of the Texas Gulf Coast, operations for production are carried on by Houston Gulf Gas Company and Mission Drilling Company.

Houston Gulf Gas Company, one of United Gas Company's major subsidiaries, maintains a drilling department and is active in field operations for its own account, its primary work being in the extensive Refugio field, where it is a large lease holder. Here it is drilling four wells and rigging up on two locations.

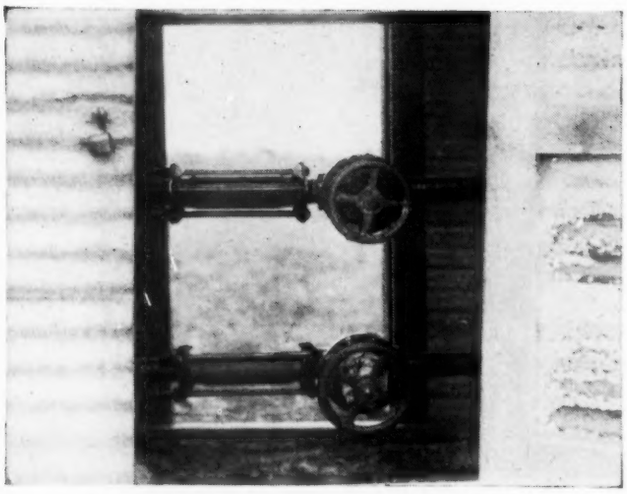
Refugio Field Activities

In March, 1929, United Gas Company acquired the property of the Mission Drilling Company of Texas, which consisted of 651 acres of leases in the proven section of Refugio and White Point fields. On this property was one oil well, Cummins 1, which produces 300 barrels of oil per day on a close choke. After taking over the Mission Drilling Company of Texas, it was reorganized and rechartered under Delaware laws as the Mission Drilling Company. Under the new name it continues active drilling operations on the above mentioned leases and is prepared to do contract drilling for other subsidiaries of the United Gas Company.

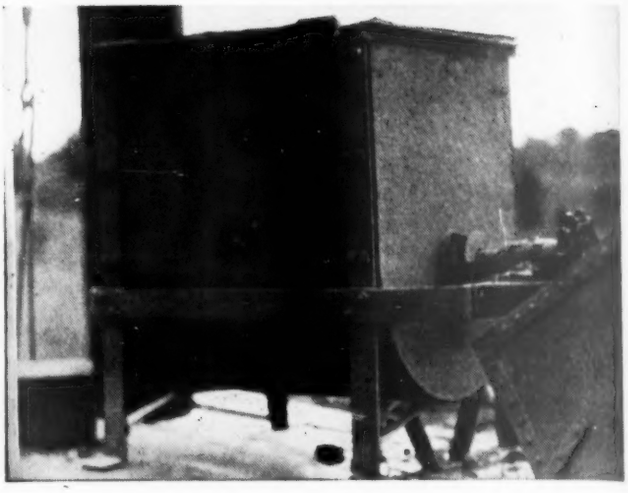
Since the discovery of Refugio field in September, 1920, a total of 156 wells had been drilled there as of May 20. Of this total, 105 wells, including 13 oil wells, were commercial gas producers. Wells lost through blowouts number 14, while 36 were failures. The percentage of commercial wells, when compared with the percentage of failures is unusually high.

Notes on Refugio Field

In Refugio field, it has been estimated by some petroleum geologists, considerable volume of gas remains uncovered in the shallow producing horizons down to



Top: Three-sixteenth inch choke and 1600-pound Westcott valve; bottom: three-eights inch choke and 1600-pound Westcott valve on Houston Gulf Gas Company's Rook 1, Refugio gas field.



Special mud mixer used in drilling Richland Production Company's J. A. Hemler 1 in Richland field, Louisiana

and including the exceptionally prolific sand at the 2400-foot level. This remaining volume of gas refers to that which is assumed to lie underneath portions of the field yet unproven. It appears reasonable to estimate volume of sands found by recent deep drilling at Refugio at a minimum of 100 billion cubic reroverable feet. Some engineers have placed this potential at 200 billion cubic feet.

Above potential yield estimates do not contemplate the area in recent extensions of the field to the southeast, south, southwest and west. Inclusion of this added territory probably would raise the estimate conservatively 25 per cent.

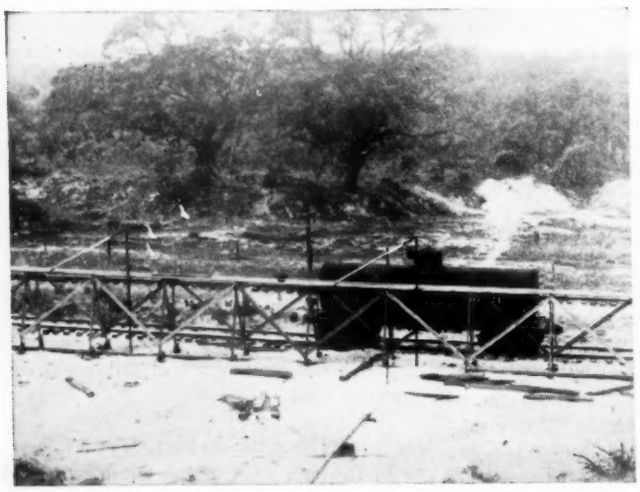
A distinctive feature of Refugio field is the number of gas producing sands found there. Seven sands have been found between 1500 and 2400 feet. Deeper drilling during 1928 and the current year has resulted in discovery of high-pressure deeper sands between 3200 and 3700 feet on the northwest flank of the field, where the field's deepest hole, 5235 feet, was drilled. (Practically the only deep well drilled in that portion of the field referred to as proven was a north offset to the discovery well. It was drilled to 5002 feet.)

San Patricio and Bee County Activity

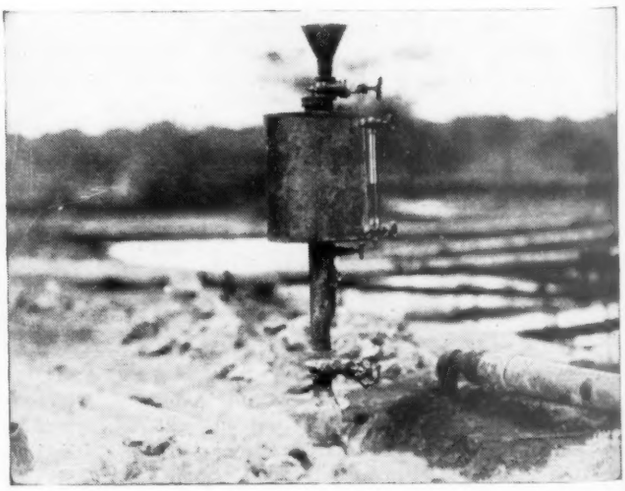
In San Patricio County, Houston Gulf Gas Company is preparing to spud in on its Welder property, while up in northern Bee County Mission Drilling Company has recently finished Ray 2 for 45 million cubic feet of gas at 2860 feet. In the vicinity of the well, United Gas Company holds leases on 16,000 plus acres. On the property on which Ray 2 is located, one gas well has been finished and shut in for lack of transportation. The property was acquired early this year from Dr. H. E. Hewitt and associates.

With reference to San Patricio County, it is the site of White Point gas field, where United Gas Company purchases gas production of the Saxet Gas Company. This field is situated in the central south portion of the county. The first well was drilled there in 1904 by Randolph Robertson to a depth of 450 feet. Of the other tests drilled during the following two years, two were lost as a result of blowouts. Development in earnest commenced about 1915, but was allowed to lapse. Later development by Saxet Gas Company has led to discovery of a prolific gas sand at 2550 feet. That company's Rachel 2 was completed at this depth for a good gas well, showing a rock pressure of 835 pounds and a working pressure of about 800 pounds. Development of White Point gas field may be said to have just begun, so far as modern drilling practice is concerned.

A few miles south of White Point gas field, on the south shore of Nueces bay, lies Saxet field, another source of natural gas for Houston Gulf Gas Company through its contract with the Saxet Gas Company. Not enough drilling has been



Portion of Houston Gulf Gas Company's 10-car loading rack at Refugio field.



Word treater for treating oil at Refugio field with Tret-o-lite. This is on line coming from Houston Gulf Gas Company's Cummins 1.

WORD'S CHEMICAL FEEDER

CUTS COSTS AND "CUTS" PRODUCTION

The ruggedly made Feeder consists of a 12″ steel drum 15″ high, which will hold 7 gallons of chemical. A valve and funnel are on top to allow filling, and a water guage set is at the side of the drum to show the level of the Chemical. The feeder is connected to the flow line by means of a 2″ nipple, one end of which is welded to the bottom of the drum. A riser within the drum allows gas to gather on top of the chemical, forcing chemical through the sight feed, which has a needle valve control, permitting close adjustment of the amount of chemical feed into the line.

The Feeder will operate with perfect accuracy on a pressure as low as 4 lbs. and as high as 500 lbs. It is not only suitable for Tret-o-lite, but for any chemical used in treating oil.

This picture shows a Word Chemical Feeder in actual operation on the line of the Houston Gulf Gas Company, Cummings No. 1 at Refugio as described in the special United Gas Company Section with this issue of the Oil Weekly.

Wire, phone or write — we are always on the job.

WORD SPECIALTY MFG. CORP.

HOUSTON

Send mail to
P. O. Box 276
HOUSTON

"The Best Known WORD in the Oil Fields."

Phone
Day . . Preston-1927
Night . . Val.-21022
Hadley-1973

Waskom compressor and gasoline plant of Dixie Gulf Gas Company subsidiary of United Gas Company, at Waskom, Texas

done at Saxet to determine its potentialities.

What promises to be a very valuable reserve for the United Gas Company is its holding in the recently found Agua Dulce field, western Nueces County. One of the subsidiaries of the organization has drilled five wells in the field. As there is no pipe line outlet for the gas wells, they are shut in. Rock pressure on them stands at 850 pounds. Agua Dulce, which is already served by a line belonging to Houston Pipe Line Company, will be tapped by a feeder line belonging to one of the United Gas Company subsidiaries as soon as gas from the field is needed.

East Texas—North Louisiana Production

Producing activities of United Gas Company in East Texas and North Louisiana are carried on by two subsidiary companies. These companies are the Greenwood Production Company and the Richland Production Company. They furnish gas to the Dixie Gulf Gas Company and to the Dixie Gas and Utilities Company, both major subsidiaries of United Gas Company.

Greenwood Production Company owns properties in Monroe gas field and owns production in Carterville, Greenwood and Waskom fields. Producing properties of United Gas Company in Richland field are owned and operated by Richland Production Company.

The company's present production in Carterville gas field, Bossier Parish, Louisiana, is five million cubic feet of gas per day. In Cotton Valley field, Webster Parish, it is eight million; in Greenwood field, Caddo Parish, it has a production of 12 million cubic feet per day. Bethany field, in the heart of Jaybird Thicket, near the town of Bethany, formerly known as Lick-Skillet, Panola County, Texas, produces 20 million cubic feet per day for the Greenwood Production Company, while Waskom field, Harrison County, furnishes 12 million.

Above figures are predicated on production as of early May which is being added to from time to time. They represent production capacity under state law allowance and not potential open flow production.

Cotton Valley gas field is producing from the Trinity sand horizon at a depth of approximately 4600 feet. Carterville field is producing from the Woodbine formation at a depth of 3100 feet. Each of these fields has thus far utilized only one sand for production. Greenwood field's only producing sand is the Nacatoch, found at about 1000 feet. Deeper drilling may result in discovery of additional sands in these fields.

Waskom field, at which the United Gas Company has a large compressor station and gasoline plant, produces from four sands. In Waskom field, the Nacatoch sand is found at 1000 feet; the Blossom sand is found at a depth of 1900 feet; the Woodbine at 2300 feet, and the Duck Creek sand at 2700 feet.

Bethany field also derives production from four sands. The Nacatoch sand is found in Bethany field at 950 feet; the Blossom sand at 1900 feet; the Woodbine sand at 2300 feet and the Adams sand at 2700 feet.

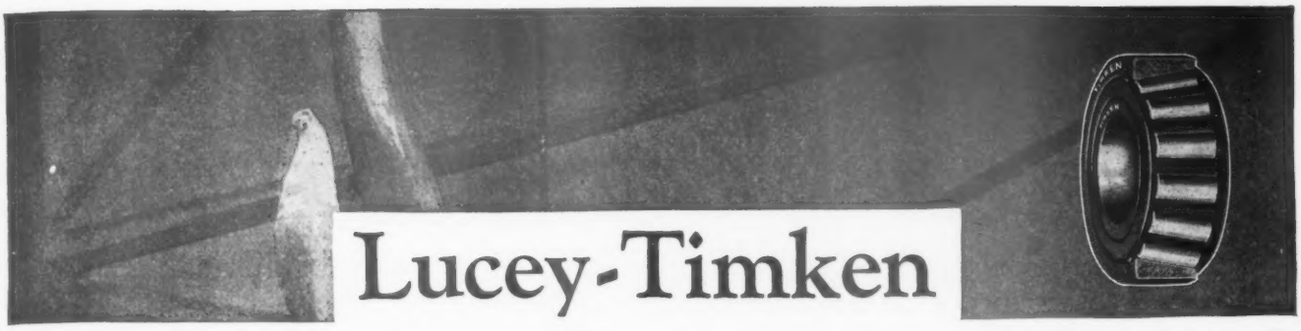
In several of these fields, deep sands has not been developed or tested. At present only production in Northwest Louisiana and East Texas fields is piped to Dixie Gulf Gas Company direct, but arrangements are being made to transport gas from Richland and Monroe fields into Waskom before this winter's cold weather is well under way.

Production of Richland and Monroe fields will be made available to back up the market of Dixie Gulf Gas Company and Dixie Gas and Fuel Company, another United Gas Company subsidiary, in addition to being made to furnish a substantial percentage of the gas required for lines now being constructed to Atlanta, Birmingham and St. Louis.

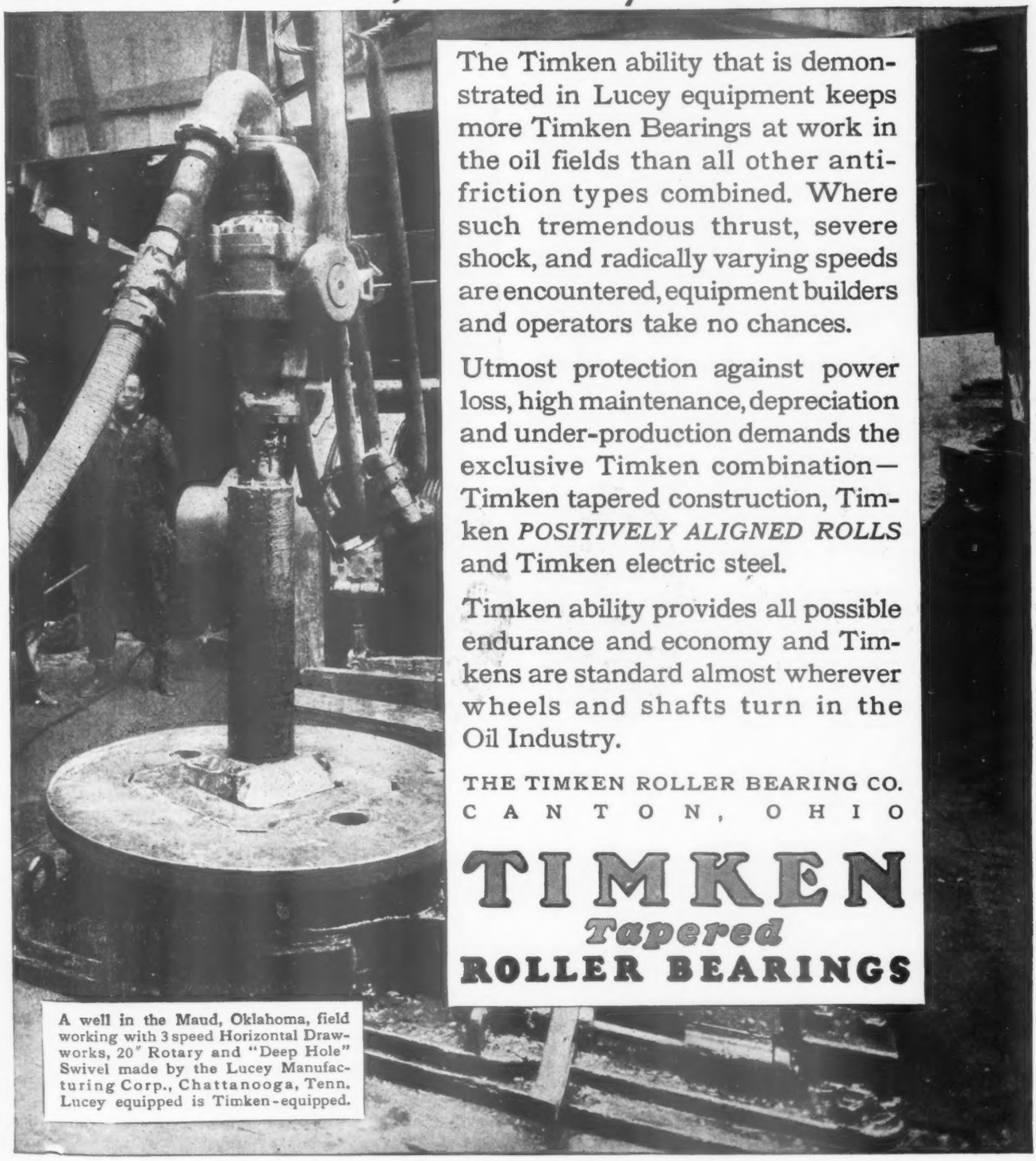
General Producing Characteristics

General production in North Louisiana and East Texas areas is derived from the Upper and Lower Cretaceous formations, which in the main consist of well-cemented sand. This condition helps eliminate major sand difficulties, and the cementation of the sands does not decrease the porosity but acts as a binder for the sand. Such is an ideal producing condition in any gas field. An exception to this condition is found in Richland gas field, which is producing from an unconformity between the Upper and Lower Cretaceous. Richland's sand is characterized by a looseness and lack of cementation which makes it difficult to open the wells. The loose sand which comes out of large wells in this area has a tendency to cut off all connections when the well is opened. All drilling in East Texas and North Louisiana is done with rotary tools. Cable tools are not practical, according to the operators, for successfully penetrating and maintaining well walls through the formations prevalent close to the producing horizons.

Ten stock tanks, 23,000 gallons each, at Waskom compressor station of Dixie Gulf Gas Company



Lucey-Timken Draw-works, Rotary and Swivel



The Timken ability that is demonstrated in Lucey equipment keeps more Timken Bearings at work in the oil fields than all other anti-friction types combined. Where such tremendous thrust, severe shock, and radically varying speeds are encountered, equipment builders and operators take no chances.

Utmost protection against power loss, high maintenance, depreciation and under-production demands the exclusive Timken combination—Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken electric steel.

Timken ability provides all possible endurance and economy and Timkens are standard almost wherever wheels and shafts turn in the Oil Industry.

THE TIMKEN ROLLER BEARING CO.
C A N T O N , O H I O

TIMKEN
Tapered
ROLLER BEARINGS

A well in the Maud, Oklahoma, field working with 3 speed Horizontal Draw-works, 20" Rotary and "Deep Hole" Swivel made by the Lucey Manufacturing Corp., Chattanooga, Tenn. Lucey equipped is Timken-equipped.

Importance of Gas in Southwest Shown in Companies' Growth

Moody-Seagraves organization groups twenty-five subsidiaries in production and distribution to the consumer

IN that division of the petroleum industry devoted to transportation of natural gas, the greatest achievement in America during the past two years has been the phenomenal growth in physical property holdings and influence among southern people of United Gas Company.

Chartered in Delaware a little more than one year ago, this organization, which has headquarters in Houston, has taken over or built a network of natural gas gathering and distributing lines that are of great economic value to the communities served.

United Gas Company either owns outright or holds controlling interest in 25 companies directly dealing with transportation or production of natural gas in Texas and Louisiana. Through its subsidiaries it is delivering gas through lines running through 35 counties in Texas and three parishes in northwestern Louisiana. This does not include projected lines of its subsidiaries or projected lines in which the organization holds less than controlling interest.

Gas lines of the organization deliver fuel to the following towns and cities: Marshall, Longview, Kilgore, Hallsville, Scottsville, Jonesville, Lindale, Swan, Waskom, Tyler, Rusk, Jacksonville, Troupe, Henderson, Palestine, Carthage, Nacogdoches, Timpson, Garrison, Livingston, Goodrich, Beaumont, Orange, Houston, Port Arthur, Rosenberg, San Antonio, New Braunfels, Seguin, Hondo, Sherts, LaCoste, D'Hannis, Austin, Robstown, Sinton, Harrisburg, Garden Villas, Refugio, Laredo, Aguilares, Hebbronville, Bruni, Mirando City, Oilton, Liberty, Dayton and Crosby.

Of the 49 towns and cities listed above gas is wholesaled to five. They are: Tyler, Palestine, San Antonio, Port Arthur and Austin.

Subsidiaries

United Gas Company has authorized an outstanding 100,000 shares of no-par $7.00 cumulative preferred stock on which dividends are being paid. It has an authorized 2,500,000 shares of no-par common stock of which more than 1,050,000 shares are outstanding. The common stock is listed on the New York Curb Market and the Chicago Stock Exchange. United Gas Company has contracted to manage the operations, direct the financing and purchasing materials and supplies for its subsidiaries. Those subsidiaries which it controls are:

United Gas Engineering Corporation.
Dixie Gas and Utilities Company.
Houston Gulf Gas Company.
Dixie Gulf Gas Company.
South Texas Gas Company.
Mission Drilling Company.
Southwest Distributing Company.
South Texas Pipe Line Company.
Duval Texas Sulphur Company.
Greenwood Production Company.

Above listed subsidiaries of United Gas Company are the major subsidiaries. Four of them have subsidiaries also. The Dixie Gas and Utilities Company, for instance, controls the Dixie Gas and Fuel Company, the Richland Production Company and the State Line Oil & Gas Company, Inc.

Houston Gulf Gas Company, another of the major subsidiaries listed above, controls nine subsidiaries itself. These sub-subsidiaries, which operated principally in the Texas section of the Gulf Coast, are as follows:

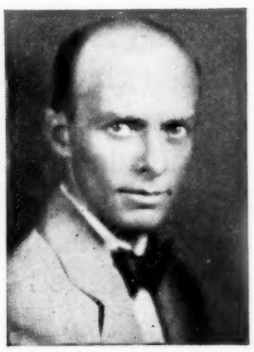
Houston Gas & Fuel Company.
Robstown Gas Company.
Robstown Pipe Line Company.
Seagraves Gas Company.
Sinton Gas Company.
Sinton Pipe Line Company.
Southern Gas Company.
Southern Gas Utilities, Incorporated.
Western Gas & Fuel Company.

Port Arthur Pipe Line Company, an industrial project, is controlled by Dixie Gulf Gas Company. Under management of South Texas Gas Company there are Motor Fuel Products Company, South Texas Production Company and Texas Border Gas Company.

Miscellaneous interests of United Gas Company include 20 per cent. interest in the 24-inch, 460-mile line under construction from gas fields in the Monroe, Louisiana, district to St. Louis; 100 per cent. interest in the projected natural gas line from the Laredo fields to Monterrey, Mexico, and interest in the line being laid from Lea County, New Mexico, to El Paso, through interest in the holding company, Natural Gas Securities Corporation, which controls the company that will operate the line. In addition to above miscellaneous interests, South Texas Pipe Line Company has signed a contract with Smith Brothers Construction Company to lay a 16-inch line from Converse, north of San Antonio, where it will tie into San Antonio lines to supply additional gas to San Antonio and vicinity from Refugio and Bee Counties.

Expansions

Moody-Seagraves properties in North Louisiana and East Texas, which were eventually turned over to United Gas Company subsidiaries, were acquired



W. L. Moody, III, vice-president and treasurer, United Gas Company

O. R. Seagraves, president, United Gas Company

J. F. Reed, assistant to W. L. Moody, III

N. W. Hunter, assistant to the president, United Gas Company

during the past two years. During March, 1927, they purchased from Thigpen-Herold interests in Shreveport the State Line Oil & Gas Company. With this company as a nucleus, the following companies and properties were subsequently purchased and added to holdings of the State Line Oil & Gas Company:

A. C. Howard, vice-president and general manager United Gas Engineering Corporation and Dixie Gas & Fuel Company

(a) Commercial Natural Gas Company, which owned a 10-inch and eight-inch transmission line from Waskom field to Marshall, Longview and Tyler, Texas. This line since has become property of Dixie Gas & Fuel Company, a subsidiary of Dixie Gas & Utilities Company.

(b) Marshall Gas Company, which operated the domestic distributing system in the city of Marshall.

(c) Industrial Gas Company, which owned and operated a 10-inch natural gas line from Waskom gas field to Marshall, Texas, and distributed gas in this city for industrial consumption.

Alba H. Warren, vice-president and general manager Houston Gas & Fuel Company

(d) The distributing system of the Southwestern Gas & Electric Company at Beaumont, Texas. This system since has become property of the same subsidiary which took over the Commercial Natural Gas Company.

(e) Distributing systems in Longview, Waskom and Bethany which were purchased from Cities Service Company.

With purchase of the above properties and construction of distributing systems in approximately 20 other towns and cities in East Texas, the Dixie Gas & Utilities Company was organized as a holding company for the Dixie Gas & Fuel Company. This latter company actually owned and operated the distributing plants and the transmission line from Waskom going further west into East Texas. That line of Dixie Gas & Fuel Company subsequently was extended into Palestine, Jacksonville, Henderson and Rusk, Texas. This section of United Gas Company's natural gas system comprises in excess of 19,000 consumers.

N. N. Oille, vice-president and secretary United Gas Company

Production Activity Expansions

Richland Production Company, wholly owned by Dixie Gas & Utilities Company, has 15 producing wells in Richland gas field of Louisiana and is drilling another. The company still has three times as much undeveloped acreage in this area as that which it has already developed to supply United Gas Company mains.

During the two years period that Moody-Seagraves interests were expanding, Greenwood Production Company was organized as a subsidiary of the Dixie Gulf Gas Company for the purposes of developing gas for its main line system. The company operates properties in Monroe, Carterville, Greenwood and Waskom fields. It is now a direct subsidiary of the United Gas Company.

Other subsidiaries active in the production branch of the company's activities are Houston Gulf Gas Company, Mission Drilling Company, South Texas Production Company. The first two of these are engaged in production work in the coastal part of Texas, particularly in Refugio, San Patrico, Nueces and Bee Counties.

Among the more important pipe line subsidiaries operating in the San Antonio and Laredo districts which the United Gas Company has obtained control of are the Southern Gas Company, Southern Gas Utilities Company and the South Texas Gas Company.

Pipe Line Subsidiaries

Southern Gas Company operates a line from the Carolina-Texas and Cole gas fields in Webb and Duval Counties, respectively, north to San Antonio. The line is 143 miles long and is made up of 12-inch pipe. The company also has a 10-inch lateral line running from Mathis field in San Patrico County, through Lucas field in Liveoak County, to Callaham Junction, where it joins the aforementioned main line running to San Antonio.

Southern Gas Utilities Company, Inc., a subsidiary of Houston Gulf Gas Company, handles activities of United Gas Company in the vicinity of San Antonio. This company has 40 miles of eight-inch line running west from San Antonio to the shallow Adams gas field in Medina County. From Adams field, and running west, it has 23 miles of six and four-inch line running through Hondo to D'Hanis, both of which are in Medina County also. Southern Gas Utilities Company, Inc.'s line extends northeast from San Antonio to New Braunfels, a distance of 39 miles. This line is laid with eight-inch pipe, and enroute it taps to and serves Seguin with 12 miles of six-inch pipe. From New Braunfels to Austin, another subsidiary, Western Gas and Fuel Company, delivers gas to the latter city through 47.8 miles of 12-inch pipe.

Another subsidiary of United Gas Company operating in Laredo district fields is the South Texas Gas Company, which operates a line running from the Carolina-Texas gas and oil field to the city of Laredo. The company operates a lateral line from Jennings pool to the Carolina - Texas - Laredo main and one from Aguilares to Mirando field. This company supplies Hebbronville with gas by means of a line connected to that city from Cole pool. Hebbronville is in Jim Hogg County.

M. A. Hardie, vice-president and general manager Houston Gulf Gas Company and general manager Dixie Gulf Gas Company

Houston Gulf Gas Company, one of United Gas Company's major subsidiaries, is a transporter of natural gas as well as being active in the organization's producing department. The 14 and 16-inch line between Refugio and Houston, via Edna, is part of this company's operation. Also it controls Houston Gas and Fuel Company, which distributes gas for domestic consumption in Houston.

L. A. Nordan, vice-president and general manager Southern Gas Company

Robstown Gas Company is the company's subsidiary for serving the domestic consumption of Robstown, while the Robstown Pipe Line Company operates for the purpose of transporting gas to that city from the southwest terminus of Houston Gulf Gas Company's line near White Point gas field. Sinton Gas Company and Sinton Pipe Line Company serve the same purpose with reference to delivery to and in Sinton. Both are subsidiaries of Houston Gulf Gas Company.

B. A. Hardey, executive vice-president Dixie Gulf Gas Company

Above detailed description of the various subsidiaries' activities not to mention those of Southwest Distributing Company, South Texas Pipe Line Company, Duval Texas Sulphur Company, Western Gas & Fuel Company, Motor Fuel Products Company and Texas Border Gas Company, indicates clearly the tremendous influence which United Gas Company has in Texas and Louisiana.

Directors of this company are composed, for the most part, of men who have been prominently identified with the growth of the natural gas industry

throughout the United States. Several of them are pioneers in this section of the petroleum industry, insofar as its activities in Gulf Coast states are concerned.

The directorate of United Gas Company is composed of five men: O. R. Seagraves, G. E. Barrett, W. L. Moody III, E. G. Diefenbach and Warren J. Dale.

Officers of United Gas Company are O. R. Seagraves, president; W. L. Moody III, E. G. Deifenbach, N. N. Oille and C. H. Walker, vice presidents; W. L. Moody, III, treasurer; N. N. Oille, Warren J. Dale, J. F. Reed and J. B. Huff, Jr., assistant treasurers; N. N. Oille, secretary; Warren J. Dale, J. F. Reed, E. F. Cadiz and W. W. Chapman, assistant secretaries.

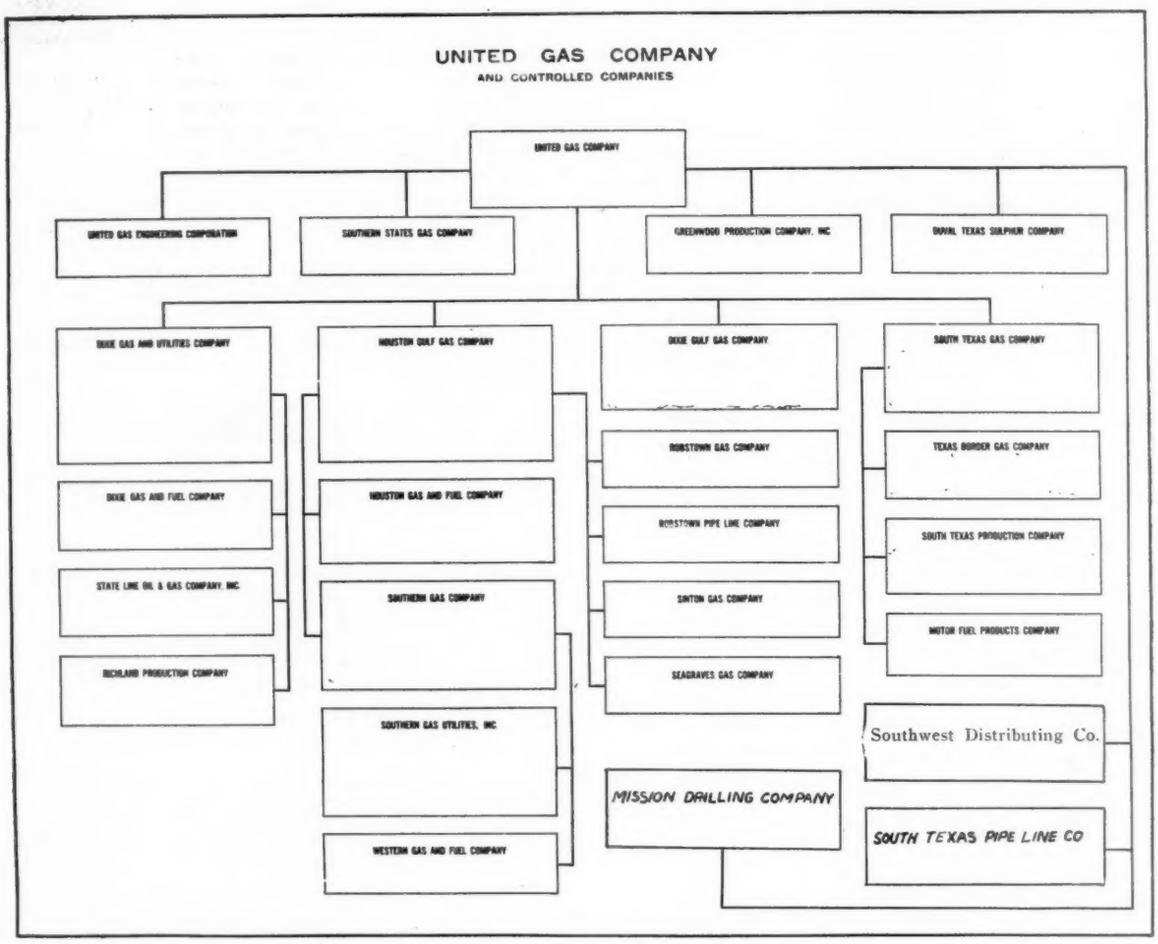
Chart Shows Company Relationship Through *Stock Control*

WHERE a company has grown so large that it controls directly or through subsidiaries 25 chartered organizations operating in three states, some sort of arrangement whereby employees will appreciate the relation of "this company to that" and of both to the mother company becomes necessary.

The skeleton chart shows relation of various United Gas Company organizations one to another and to the holding company. Copies of this chart, giving more detail than the illustrated skeleton, are furnished those employees in the various companies whose work necessitates a full understanding of these relations.

In addition to the information shown on the skeleton herewith reproduced, the official chart furnished company employees shows the capitalization of each subsidiary, the number of shares of common and preferred stock of each, the par values of these stocks, together with the total percentage of stock in the subsidiary owned by the United Gas Company. If the subsidiary has issued bonds, the amount and value of them is given in the blank space below the subsidiary's name. If mortgages are outstanding against the company's assets, the amount and due date of the mortgage is shown.

Possession of the chart by those whose duty it is to record credits and charges to subsidiaries is of inestimable value, notwithstanding the fact that personnel turn-over among this type of employees is surprisingly low and that the men usually have time to become thoroughly familiar with the recording of United Gas Company subsidiary inventories.



HOMES FOR THE OIL INDUSTRY

These "Houston" Buildings furnished the Houston Gas Co. for their Edna, Texas Station.

Manufactured, ready for erection in our plant.

Easily and quickly erected as they are shipped out in sections —each section plainly marked.

We erect when desired.

1000 plans to select from— write for yours—homes, offices, warehouses, bunk houses, mess halls, sectional buildings for every purpose.

95% salvage value; readily taken down and re-erected.

PROMPT Shipment from Stock.

HOUSTON READY-CUT HOUSE CO.

Successors to CRAIN READY-CUT HOUSE COMPANY
In the manufacture and construction of houses.
HOUSTON, TEXAS

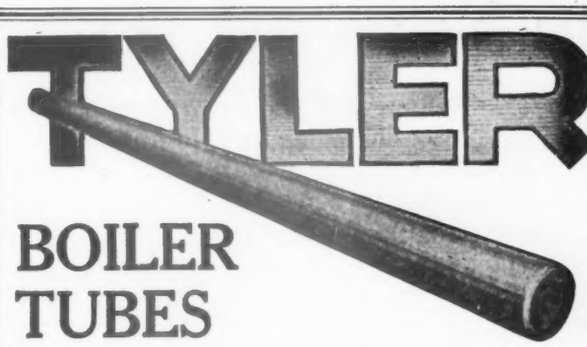
ASCO STEEL
STANDS SUPREME

Every step in the production of Asco Steel is watched closely. From the selection of the raw materials to the finished product, the first thought always is to produce a steel that will give the best results to the makers of Oil Well Tools. Can we help you to produce better tools?

DISTRICT OFFICES:
541 McCormick Bldg., Chicago, Ill.

THE ANDREWS STEEL CO
NEWPORT KENTUCKY

TYLER



BOILER TUBES Resist corrosion—

whether it is charcoal iron tubes for bad water conditions or lap-welded steel tubes for good water conditions—Tyler Boiler Tubes will give *lasting* satisfaction.

All tubes are made to A.S.M.E. Code Requirements.

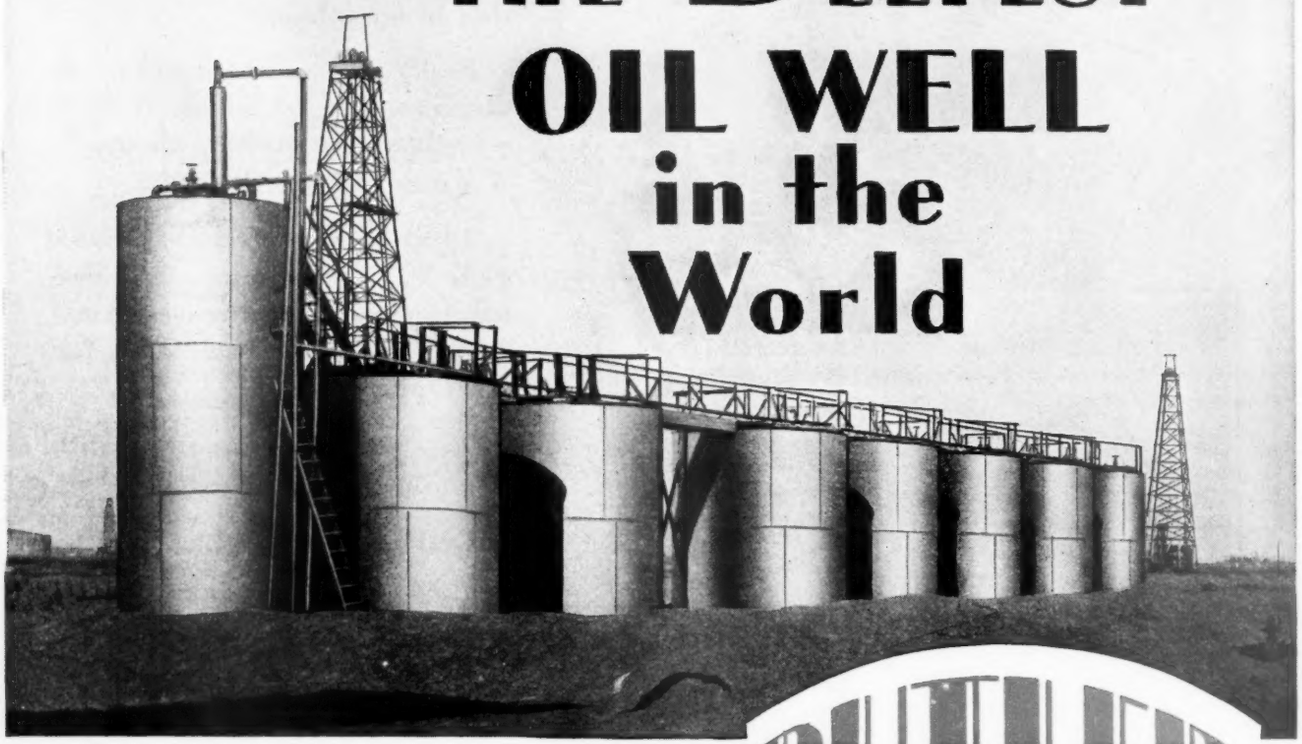
Request full details

THE TYLER TUBE & PIPE CO.
WASHINGTON, PA.

Warehouse Stocks

Harrisburg Pipe and Pipe Bending Co., Houston, Texas.
Harrisburg Supply Company, Tulsa, Oklahoma.
Johnson-Peter Company, Brooklyn, N. Y., Pittsburgh, Pa.
A. M. Castle & Co., Chicago, Seattle, Washington, San Francisco, Cal.; Los Angeles, Cal.
The Bourne-Fuller Company, Cleveland, Ohio.
Lukens Steel Company, New Orleans, La.

THE DEEPEST OIL WELL in the World



Is Served by

BUTLER BOLTED TANKS

STEEL BUTLER PRODUCTS

The Texon Oil Company surmounted tremendous obstacles in bringing in the world's deepest producing well at 8525 feet and in preserving it while 2,000 feet of open hole remained at the bottom.

The problem of tankage was of little moment, because they knew where to turn for fast and reliable field tank service and bolted steel tanks which can be depended upon in the emergency through long, everyday service.

The Butler Bolted Steel Tanks pictured here are serving the deepest producing oil well in the world at Big Lake, Texas. Group No. 1 of Texon Oil Company.

Butler Bolted Steel Tanks are made in sizes up to 10,000 barrels. Butler welded tanks are made to any specifications.

BUTLER MANUFACTURING CO.
KANSAS CITY, MO. MINNEAPOLIS, MINN.

In addition to its long established standards of Bolted Tank construction, The Butler Manufacturing Company announces production of Bolted Steel Tanks conforming with dimentional standards—A. P. I. first edition. Butler A. P. I. specification Bolted Steel Tanks will carry the official monogram reproduced here:

This, and the Butler monogram, is a double pledge of the utmost value in Bolted Steel Tanks.

These reliable dealers are ready to render speedy Butler Bolted Tank Service:

Drane-Humphrey Co., at San Angelo, Big Lake, Pyote and McCamey, Texas; and Roswell, New Mexico.

Keyes-Butler Tank Co., of Casper and Cody, Wyoming.

Drane Tank Co., at Tulsa, Holdenville, Seminole, Hallett and Shawnee, Oklahoma; El Dorado, Madison, Wichita and Valley Center, Kansas.

Muskegon Boiler Wks., Muskegon, Mich.

Gulf Coast Tank Company, 1907 Kipling Street, Houston, Texas, V. P. Hughes, Prop.

Thomas Moran, at Oil City, Shreveport and Georgetown, Louisiana.

M. A. Trimmer, at Blackwell and Lovell, Oklahoma.

Building Line Across Bay REQUIRED SPECIAL Tools *and* Methods

IN laying a line across shallow Nueces Bay to connect Saxet field with the southern end of Houston Gulf Gas Company's Refugio-Houston main line, it was necessary to employ uncommon methods, calling for construction of a special pipe tug, special pipe horses and welding horses.

Nueces Bay, at the point of crossing, has a maximum depth of about one foot, making it too deep for laying of a line without the use of boats, due to the condition of the bottom of the bay, and making it too shallow for laying lines with use of ordinary water conveyances. The line was to be eight-inch pipe, which meant that light *pirogues* or *batteaux* could not stand up under usage to which they would be subjected in laying the 16,000 feet of line. Hence the project called for heavily constructed, extremely light draft barges. Due to presence of reefs and places where the depth of the water was less than sufficient to float the tugboat, this boat had to be an amphibian so that it could navigate dry land as well as water.

Barges

In order to carry pipe from shore to the point out in the bay where pipe was being laid, construction of five special barges was necessary. These barges had an overall length of about 20 feet, or about long enough to handle the ordinary joint of eight-inch pipe conveniently with a little room left in the bow and stearn to care for crew and odds-and-ends and to make the barge float as high as possible. (Perhaps the use of a 25-foot overall length would have given even less draft, provided the same amount of load were carried.) Beam of the barges was 10 feet throughout, simplifying construction and adding to buoyancy. Sides of these barges were made 12 inches high, allowing plenty of freeboard to take care of increased draft in case the load or rough water demanded it. The side pieces carried a rake fore and aft, beginning at a point four feet from each end and traveling upward in a regular arch to a point at the end of the side board and nine inches below the top of it. Bottom planking of the barges was made up of one by sixes, laid crosswise and properly caulked. Such was, in brief, the construction of the barges which were used solely for ferrying pipe from the shore.

Pipe Horses

Following construction of the barges, the company built three pipe "horses." These "horses" consisted of two pontoons, paralled and 16-inches apart, held together by means of a superstructure which was triangular near the ends of the joined pontoons. The pontoons drew about the same amount of water as the barges, having 12 inche sides. The rest of construction on the pontoons, which were 16 feet long, followed generally that used in making the barges, with the exception of the fact that they were only three feet six inches wide each. Two of these, together with the 16-inch clearance allowed between the pontoons, gave the pipe "horse" an extreme overall beam of eight feet six inches. As to the superstructure, which was made up entirely of four by fours, it had to hold up loose ends of the lines for one purpose and to hold the pontoons together. Taking the end structures of the pontoon superstructure first, there were two upright four by fours projecting upward from the inside of the inside side of each pontoon vetically. These two were crossed at the top by another timber parallel to the bottom of the pontoons and made fast to that timber. Then from the outer sides of the pontoons, about six inches from the inside of the outer side of each pontoon, were made fast two timbers which projected upward and inward until they crossed each other at a point about seven feet above the pontoons. These were made fast at the point they rested upon the intersection of the previously vertical members and the parallel member. This was accomplished by running a bolt, as per drawing, through both slanting members and the vertical and horizontal members. This "A" shaped arrangement of tying-together timbers was duplicated on both ends of the pipe "horse." The two were then made rigid in their vertical positions by connecting them with four by four diagonals and with another four by four horizontal member near the tops. A joint of four-inch pipe was laid from the top of one "A" section to the other, resting in the crutch formed on each "A" section by crossing of the slanting members. This pipe served as a rest from which the pipe being laid could be swung.

Welding Horses

Welding "horses," like the pipe "horses," were made to straddle the pipe line and form a floating derrick by which the pipe could be lifted clear of the water for welding. Their construction throughout was the same, generally, as the pipe "horses." However, the welding "horses" had longer slanting end members to raise the pipe one foot higher than it could have been raised on the pipe "horses." This was necessary because the welding "horses," on each pontoon, carried a raised deck which was one foot above the bottom of the pontoon. This was to provide room for welders and a place to keep welding equipment. The decks were made of two by fours laid lengthwise across heavy deck beams. They were spaced about five inches apart on centers, and were six feet in length. This was the distance apart that the "A" sections were.

Novel Tug Boat

In transporting pipe through a shallow body of water like Nueces Bay, use of an ordinary motor boat was impossible. The propeller could not have functioned, and the boat could not have been an amphibian without involving highly technical and expensive construction.

The tugboat used on the Houston Gulf Gas Company's line was about 15 feet long, six feet wide and drew two inches of water when loaded. Instead of having a propeller, it was driven by outboard paddles located on each side. These paddle wheels extended about eight inches down into the water. The motive power was furnished by an old Dodge engine, directly connected to its stock transmission and having an additional transmission on the axles which turned the paddles. When the water was not deep enough to float the boat, she simply crawled along on her paddles—believe it or not.

Houston Gulf Gas Company engineers had to lay the eight-inch line across Nueces Bay to replace an older four-inch line that had not functioned properly. It was fifteen months old and did not have sufficient capacity.

Actual work of laying the line began August 1 and very good progress was made for six weeks. The line was completed in October. The manner in which the "horses" were used, as told by a member of the company's engineering staff, follows:

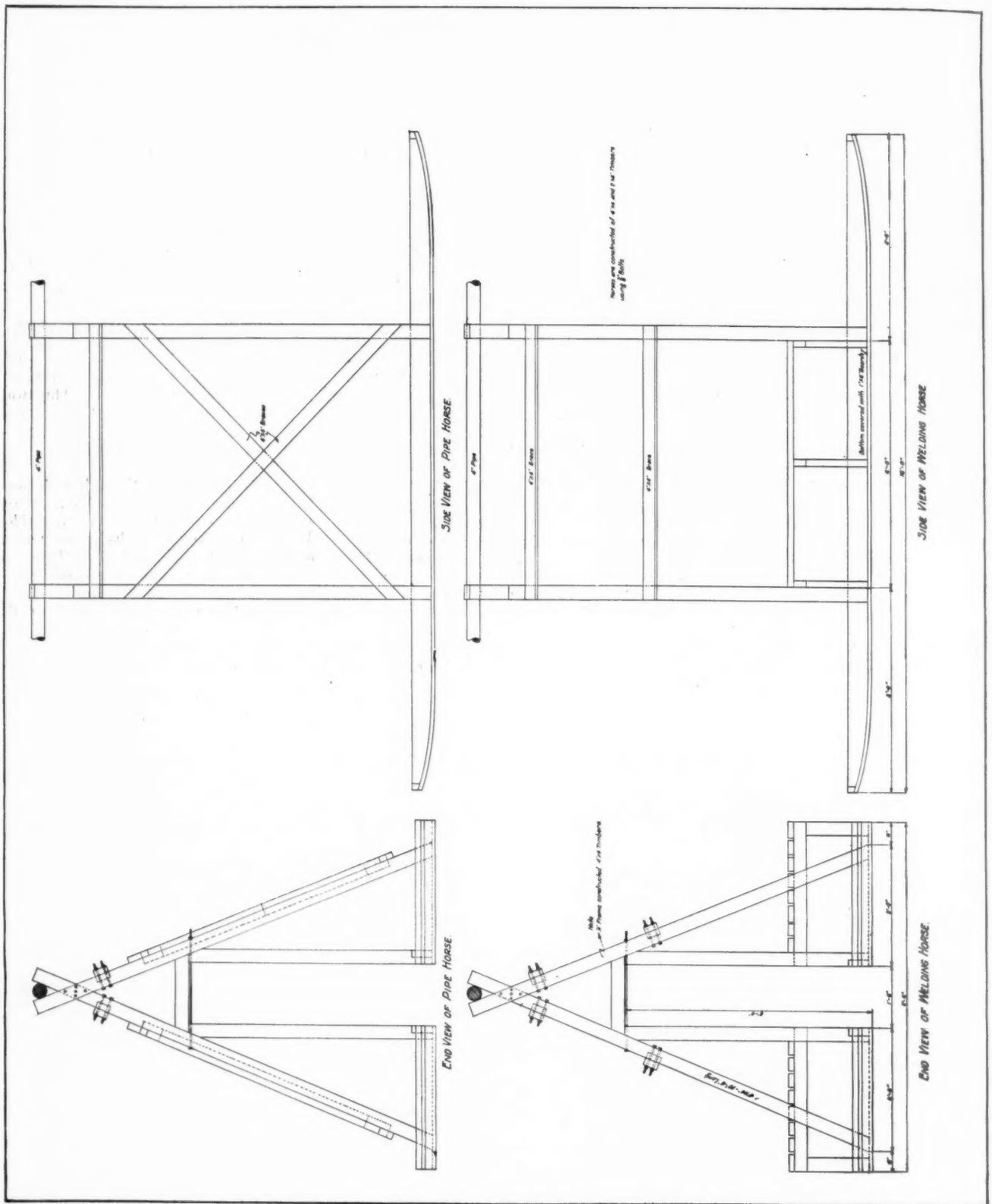
"One of the horses held up the end of the pipe that had thus far been laid; another 'horse' was at the extreme end of the pipe that was to be welded to a new joint, while the third 'horse' carried the far end of the piece of the pipe that was

to be welded. The center 'horse' was the one at which the weld was made. At first we only welded two joint together before towing then in the barge by the tugboat out to the 'horses,' or the point in the line at which the two joints were to be joined to the line. Later, we found we could weld three joints together before taking them out to the 'horses.' Then we saved time by loading one of the barges with three of these three-joint sections before taking them out to the 'horses.'

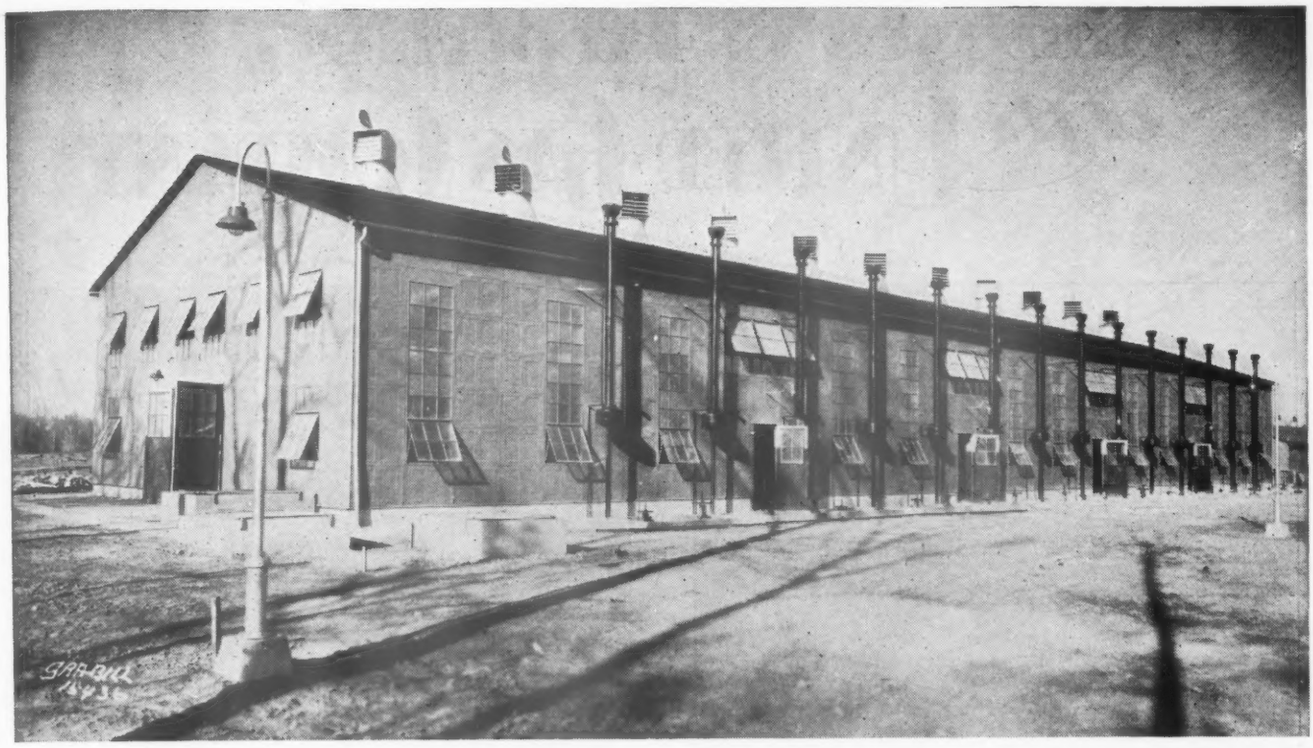
"Using the above procedure, we were able to average 15 or 20 joints per day added to the 16,000-foot line."

In treating the line for service under the water, several things were done. It was wrapped and painted for protection against salt water and was weighted down about every 100 feet with 1750-pound cast concrete blocks. The blocks were cast by the pipe line crew working on the shore of the bay.

In order to cover the under-water line, the men installed a gasoline driven plunger type pump on one of the barges. The discharge from the pump was equipped with a nozzle. Force through this nozzle played on the bottom of the bay and dug a ditch in which the pipe was cradled. Tide and current took care of covering the pipe.



Drawing of pipe and welding "horses" used by Houston Gulf Gas Company in crossing Nueces Bay



Compressor station of Dixie Gulf Gas Company, United Gas Company subsidiary, at Waskom, Texas. This station employs 30 Hope vertical engines of 160 horsepower each, in addition to 570 horsepower in the auxiliary house.

Four Main *Compressor Stations* HANDLE GAS Through Long Lines

COMPRESSORS required to draw or push gas through the network of mains in Texas and northwest Louisiana operated by United Gas Company or its subsidiaries have a total horsepower rating of 11,770. This includes the large engines in main compressor houses and those in the auxiliary houses. They furnish power for the operation of four complete compressor stations and one complete gasoline absorption plant. They keep natural gas running through more than 1300 miles of pipe, a large portion of which is composed of 14-inch, 16-inch, 18-inch and 20-inch lines.

The four compressor stations are located respectively at Refugio, Refugio County; Edna, Jackson County; Bethany, Harrison County, and Waskom, in the same county.

Refugio compressor station and the compressor station at Edna are under management of Houston Gulf Gas Company, one of the major subsidiaries of United Gas Company.

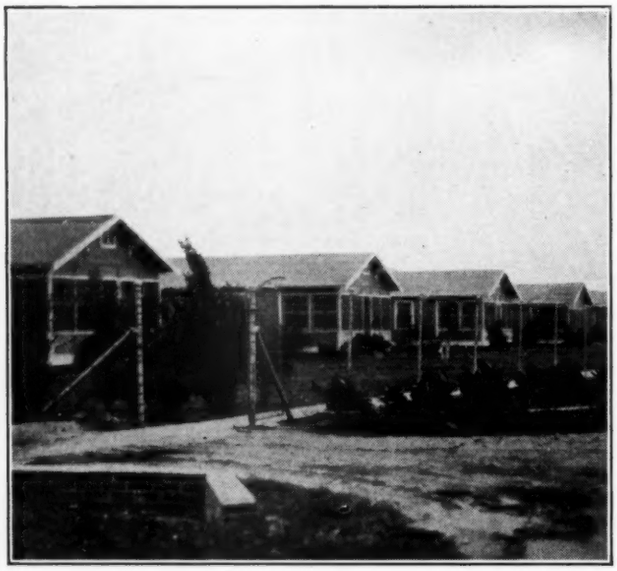
The main compressor house at Refugio station is powered by eight vertical Hope engines of 160 horsepower each. Power cylinders of these engines are 14¾ by 16-inches. Their compressor cylinders are 7½ by 16-inches. In the auxiliary house there are two Reeves gas engines. One develops 100 horsepower at 277 revolutions per minute. Cylinder dimensions on it are 11½ by 13-inches. This three cylinder engine is directly connected with two General Electric generators, alternating current next to the engine and direct current out on the end of the shaft. Generating plant connected with the 100-horsepower Reeves is rated 75 KW at 277 RPM, volts full load 125. The second Reeves gas engine in the auxiliary house at Refugio compressor station is two cylinder, 40-horsepower at 300 RPM. It is connected with an alternating current 240-volt generator and a direct current, compound type, 26 ampere generator—300 RPM speed, volts no load 125, volts full load 125, 3.25 KW.

Water for cooling the ten large engines is furnished by three Worthington electrically driven pumps, all of which are driven by induction type motors. These motors 10-horsepower, 220 volts, 25 amperes, speed full load 1750 revolutions per minute.

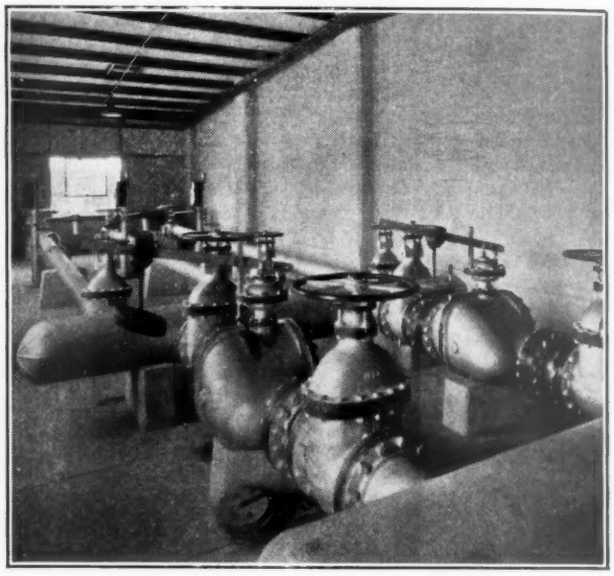
The station's supply of compressed air is furnished by two Worthington air jammers—4/3½ by 4 inches. These jammers are driven by induction motors developing 7½ horsepower at 1730 revolutions per minute. They are 220 volts, 20 amperes.

Oil for lubrication of all engines in the main and auxiliary houses, as well as for lubrication of motors and air compressors is picked up from underground tanks and forced to points of bearing by two Viking oil pumps. Each of these is driven by a General Electric alternating current motor, volts 220, amperes 1.7, horsepower one half, speed 1140 revolutions per minute, temperature raise 40 degrees time rating open. Lubricating oil circulated by the pumps is purified by a Model 600 DeLaval oil purifier which is driven by an alternating current Emerson motor, volts 220, amperes 6.3 speed 1750 revolutions per

Glimpses of Properties of the UNITED GAS COMPANY

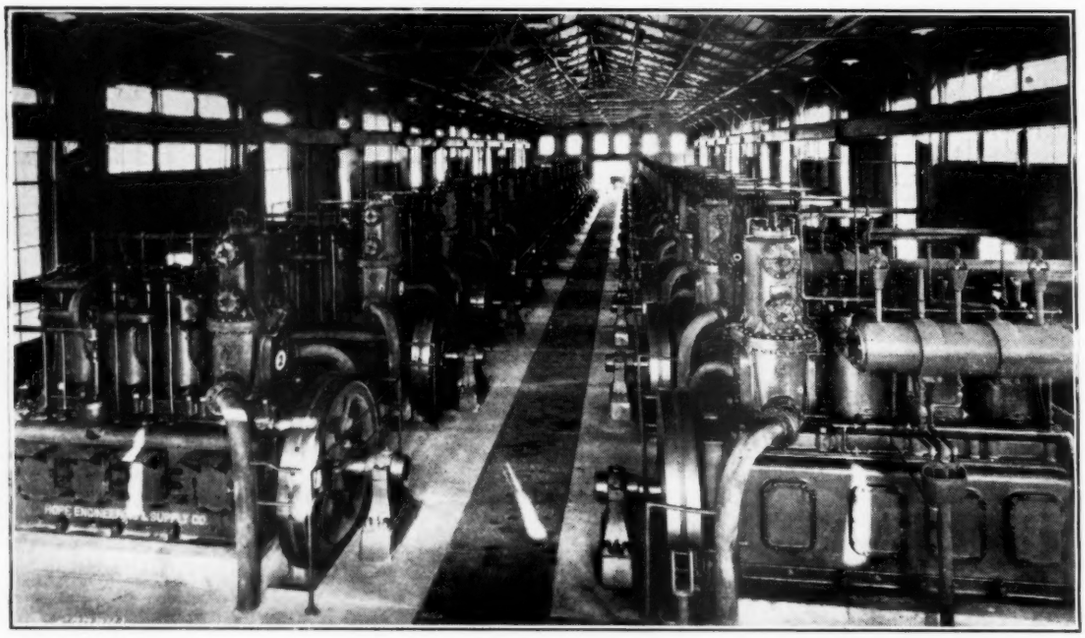


Pleasant homes make for satisfied employees at Houston Gulf Gas Company's station at Edna.



Regulator and measuring station of the Houston Gulf Gas Company, serving Lone Star Cement Company, Houston.

UNITED GAS COMPANY
"Moody-Seagraves Management"



Dixie Gulf Gas Company's Waskom compressor station is one of the largest in America. It rates more than 5100 H.P. derived from 32 Hope compressors.

Serving over 900,000 people with Natural Gas in East, Southeast and Southwest Texas, the subsidiaries of the:

UNITED GAS COMPANY

Offer the most comprehensive service extant to a numerous clientele through its extensive pipe line systems.

THE PIPE LINES

Number of miles of trunk lines	1306.09
Number of miles of distributing lines	1210.97
Number of miles of gathering lines	142.33
Total number of miles	2659.39

METERS IN SERVICE

Total number of domestic meters	73,123
Total number of semi-industrial meters	1,163
Total number of industrial meters	897
Total number of meters	75,183

Houston is served by the company through (2) great trunk lines piping gas from widely separated areas

Houston Gulf Gas Company **Dixie Gulf Gas Company** **Dixie Gas & Utilities Company**
South Texas Gas Company **Mission Drilling Company** **Greenwood Production Company**
South Texas Pipe Line Company **United Gas Engineering Corporation**

And

Houston Gas and Fuel Company
Texas Border Gas Company
South Texas Production Company
Southern Gas Company
Southern Gas & Utilities, Inc.
Sinton Gas Company
Western Gas & Fuel Company

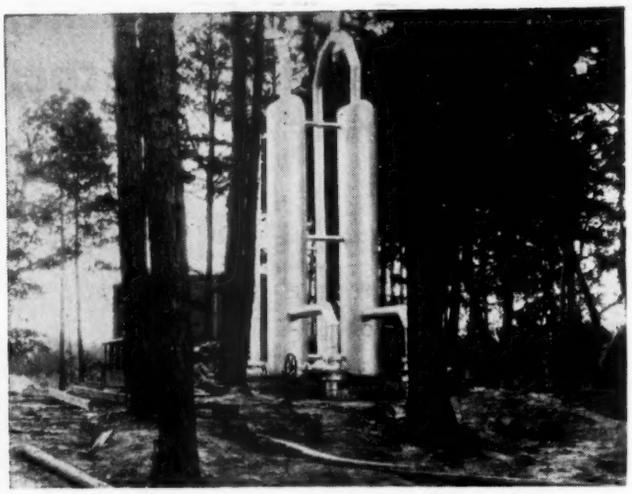
Southwest Distributing Company
Dixie Gas & Fuel Company
State Line Oil & Gas Company
Richland Production Company
Robstown Pipe Line Company
Robstown Gas Company
Sinton Pipe Line Company
Seagraves Gas Company

SUBSIDIARIES OF

·UNITED GAS COMPANY·

"Moody-Seagraves Management"

Esperson Building **Houston, Texas**



Scrubbers (designed by Hope Engineering Company) at Bethany compressor station of Dixie Gulf Gas Company at Bethany

minute, two horsepower, temperature raise 40 degrees.

Edna Compressor Station

Houston Gulf Gas Company's compressor station at Edna, Jackson County, is perhaps one of the largest compressor stations in the Gulf Coast section of Texas and Louisiana. This station picks up natural gas from the 14-inch line coming from Refugio and White Pointfields and boosts it on in to Houston through 94.8 miles of 16-inch pipe. It was designed and laid out by Hope Engineering Corporation and is one of the most efficiently operated in the country. All employees of the station live on the station lease and evidently take great pride in the plant.

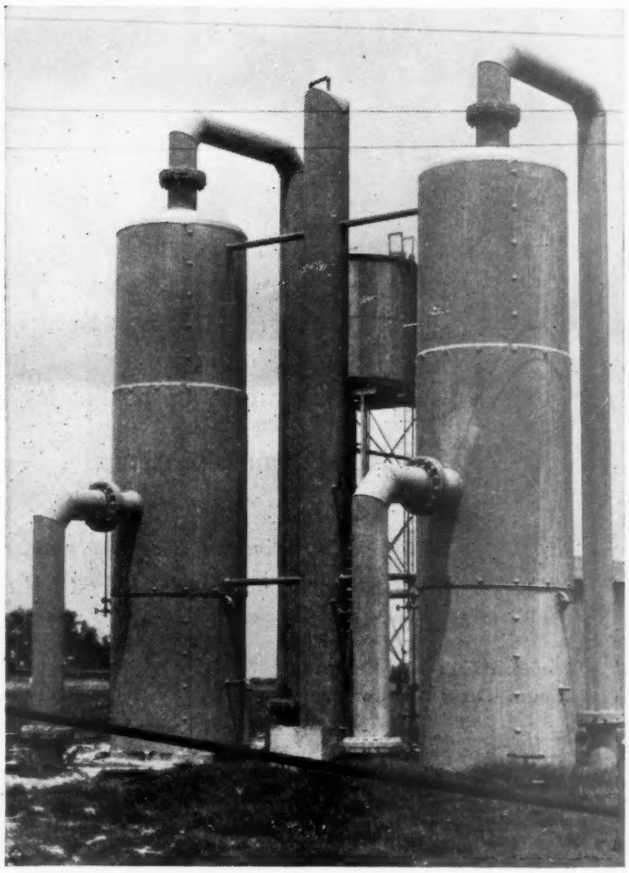
Edna station's gas engines furnish 4,040 horsepower which is used directly or indirectly in boosting gas from there to Houston and through tap lines leading off from the main. Most of this power is furnished by 24 vertical Hope engines of 160 horsepower each. These engines have power cylinders 14¾ inches by 16-inches, while their compressor cylinders are 7½ by 16-inches.

Auxiliary engines are two 100 horsepower Reeves gas engines, 11½ by 13 inches, 275 revolutions per minute. The auxiliaries are directly connected with Ridgway generators, 75 kilowatt, 275 revolutions per minute, 600 amperes, 125 volts.

There are two Worthington air compressors at the Edna station. These are size 7x7x6 inches and are electrically driven by General Electric direct current motors. The motors are compound wound, 15 horsepower, 115 volts, 111.5 amperes, and are capable of a speed of 1750 revolutions per minute.

Oil is circulated throughout the two houses of this station by two oil pumps driven by General Electric motors. Both are direct current, compound wound, volts 115, amperes 6.8, three-fourths horsepower, and capable of 1140 revolutions per minute. At Refugio, the oil is purified by a Model 600 DeLaval centrifugal oil purifier which is driven by a General Electric, compound wound, direct current motor, 110 volts, two horsepower, 16 amperes, 1750 revolutions per minute.

Hot and cold water Worthington pumps used at Enda station have an aggregate capacity of 4500 gallons per minute. There are six of these pumps, each having a capacity of 750 gallons per minute at 1750 revolutions per minute. Each pump is driven by a General Electric direct current 15 horsepower motor, volts 115, amperes 112, speed 1750 revolutions per minute.



Scrubbers on Houston Gulf Gas Company's Refugio compressor station lease. These scrubbers are equipped with Westcott valves on the suction lines and in the by-pass

Fat oil vent tank at Waskom compressor plant of Dixie Gulf Gas Company. Upper left, safety relief valve; center, liquid level control; left, vent gas to the boilers. All by Fisher.

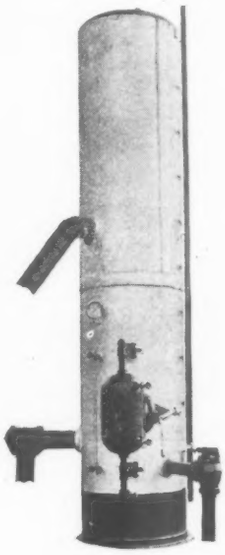
Miscellaneous equipment at Houston Gulf Gas Company's compressor station at Edna includes:

1—Runsey hand slush pump.

1—18-inch Lehmann lathe.

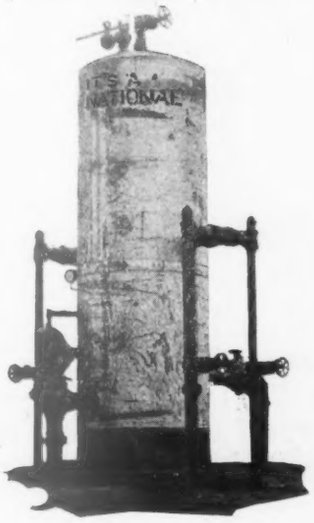
1—30 ton Manley hydraulic press.

1—23-inch mechanic's drill press operated by a General Electric direct current, compound



No. 4-A
500 lbs. W. P.

Two Types NATIONAL SEPARATORS being used by United Gas Corporation and Houston Gulf Gas Company in Gulf Coast Texas Area.



No. 2-A
125 lbs. W. P.

The two types above will adequately handle the most exact separation problems.

The No. 4-A, High Pressure Type is unexcelled in its many accomplishments, having handled exceedingly large gas and oil volumes for this type separator, such as 40 million cubic feet of gas with 5,000 barrels of oil per day at less than 300 pounds on the separator.

The No. 2-A, Standard Working Pressure Type is without exception the best low pressure type separator on the market. Its great oil and gas capacity makes it adaptable to the largest producing fields. This separator has handled over 60 million cubic feet of gas with 6,600 barrels of oil per day and also 18 million cubic feet of gas with 33,000 barrels of oil per day.

Have you investigated the National Automatic Air-Gas Lift Intermitter for flowing your wells?

Our new catalog will tell you more about National Separators and Intermitters, send for copy.

NATIONAL TANK CO.

Tulsa, Okla.

Gulf Coast Representative

NOWERY J. SMITH COMPANY
Houston, Texas

National Tank Company
Tulsa, Okla.

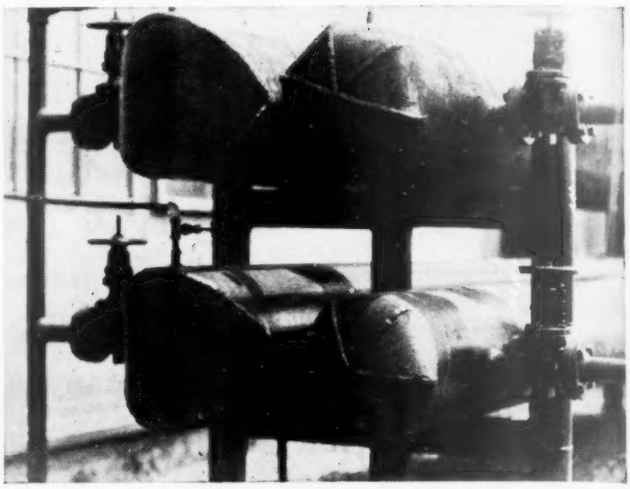
Please send me your new catalog.

Mr. .....

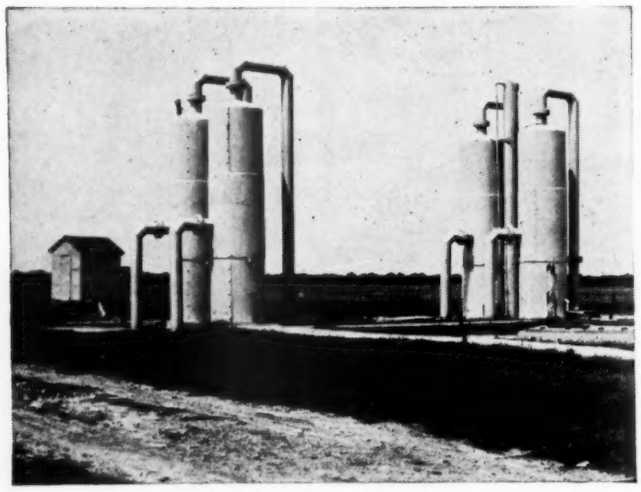
Company .....

Address .....

Below: Scrubbers made in Houston for Houston Gulf Gas Company's compressor station lease at Edna, Texas



At right: Close up of field-fabricated welding job on four air tanks of Houston Gulf Gas Company's compressor station at Refugio. Valves shown are Westcotts



wound, 1½ horsepower motor.

1—Block and Decker bench grinder. Size 8-inch.

1—Racine power hack saw run by a 2.6 horsepower, compound wound, direct current motor.

1—40-gallon Foamite fire cart.

1—Two-inch Meyers sewerage pump with a cylinder measuring three by four inches.

1—Layne water pump with enclosed shaft. This pump is driven by a motor developing 20 horsepower at 1150 revolutions per minute.

1—Fairbanks-Morse gasoline engine developing six horsepower at 450 revolutions per minute.

1—Fairbanks-Morse water pump, 2¾ by 4-inches driven by a General Electric motor developing five horsepower at 1750 revolutions per minute.

Above miscellaneous equipment does not include that used in upkeep of the lease proper, but only that required for operation of the main and auxiliary houses.

Waskom Compressor Station

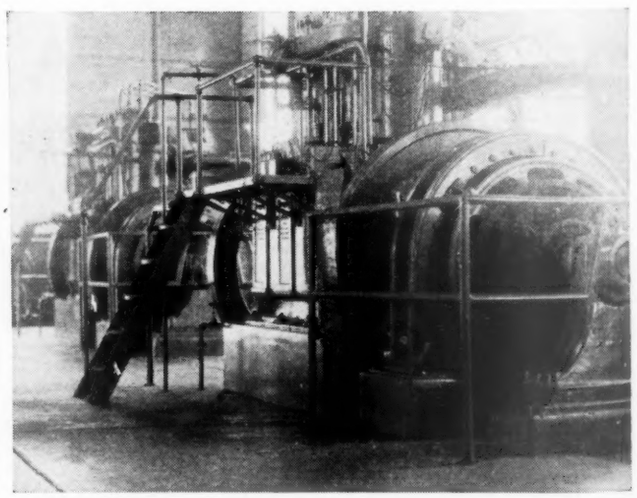
Waskom compressor station, property of the Dixie Gulf Gas Company, is located at the northern terminus of that company's main line and has been in operation since January 16, 1928. Waskom compressor station has a capacity under normal compression conditions of 80,000,000 cubic feet per day, with its present equipment. It is designed to pick up gas from low field pressures in Carterville, Cotton Valley, Greenwood, Bethany and Waskom fields at a pressure of approximately 125 pounds intake and then to discharge the gas into the 22-inch main line at a pressure of approximately 360 pounds. Waskom station consists of 30 Hope engines, 160 horsepower each. In addition to this, the auxiliary house contains engines giving 570 horsepower which generates power for operation of the station.

Besides the compressor station at Waskom, which is very similar, but on a larger scale, to that at Edna, Dixie Gulf Gas Company has on the compressor station lease a gasoline absorption plant of the Braun type. This absorption plant has a capacity of 100 million cubic feet per day — or approximately 50,000 gallons of gasoline per day. The plant is the latest model construction throughout and is fully equipped with the necessary storage tanks and loading racks. Also it has possession of privately leased tank cars for shipment of the gasoline.

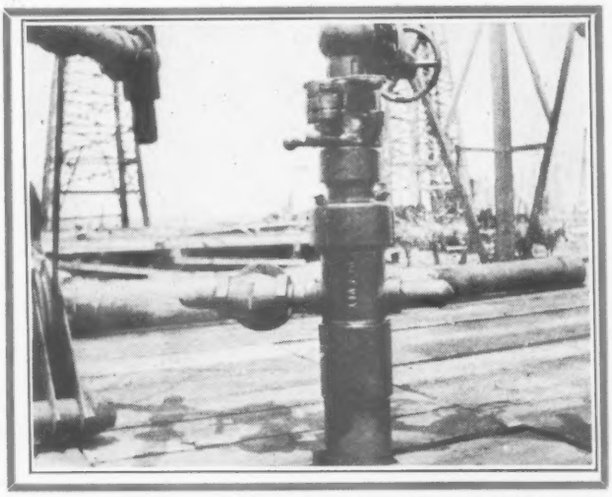
Present production from the gasoline plant is being sold under private contract at a price substantially above the market quotation. Gasoline manufactured by Dixie Gulf Gas Company at

(Continued on page 22)

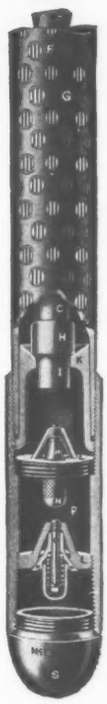
Above: Field-fabricated, Hope designed, cooling tower on Bethany, Texas, compressor plant lease of Dixie Gulf Gas Company. This lease is located in the heart of Jaybird Thicket



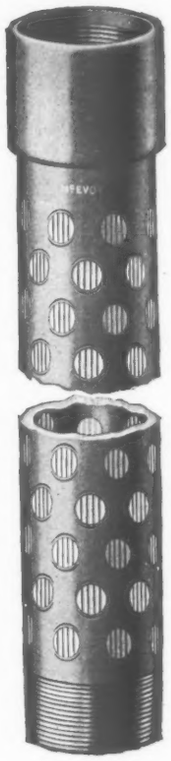
At right: Two 100-horsepower Reeves Cooper-Bessemer Corporation engines in auxiliary house at Edna compressor station of Houston Gulf Gas Company showing hook-up with direct current Ridgway generators. (75KW at 275 r.p.m.)



McEvoy Installation, Navarro Oil Company, Texas Exploration No. 14, Pierce Junction. One of the many hook-up combinations. It's "Universal."



(Patented) McEvoy Well Strainer with set shoe assembly equipped for single string well



(Patented) McEvoy Wireless regular coupled joint Well Strainer

The McEvoy Strainer has never been excelled.

100% McEvoy *Standardization*

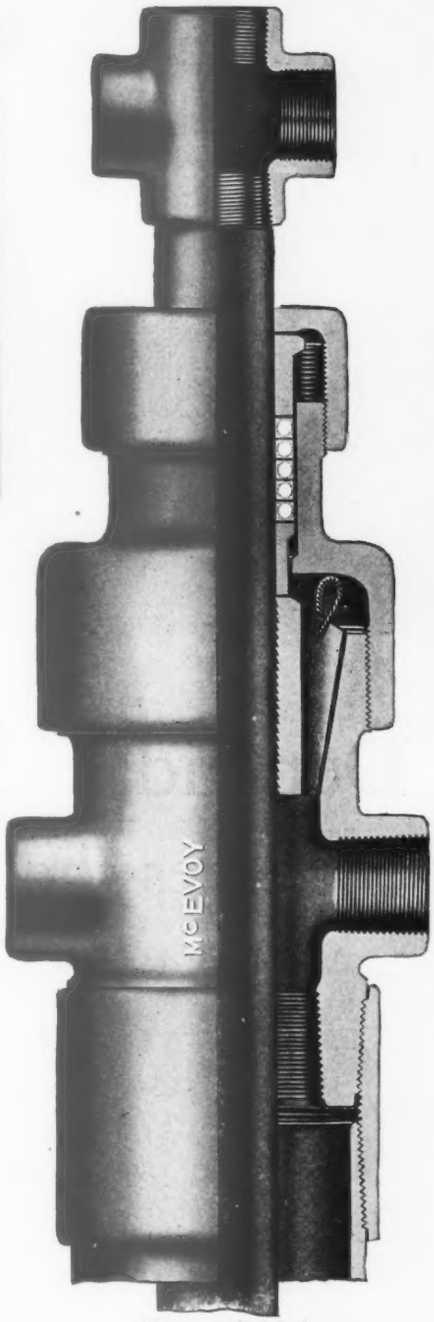
There is a reason why you find leases of so many big companies the world over standardizing 100% on McEVOY HEADS . . . McEVOY WIRELESS WELL SCREEN . . . and other McEVOY PRODUCTS.

Field Superintendents, Drillers and Oil Company Executives have found out through long experience that it contributes to their SUCCESS and PROFITS to use McEVOY products.

Call a McEvoy Representative

Consult with him on your present or future problems.

WRITE FOR THE FACTS ON McEVOY INSTALLATIONS

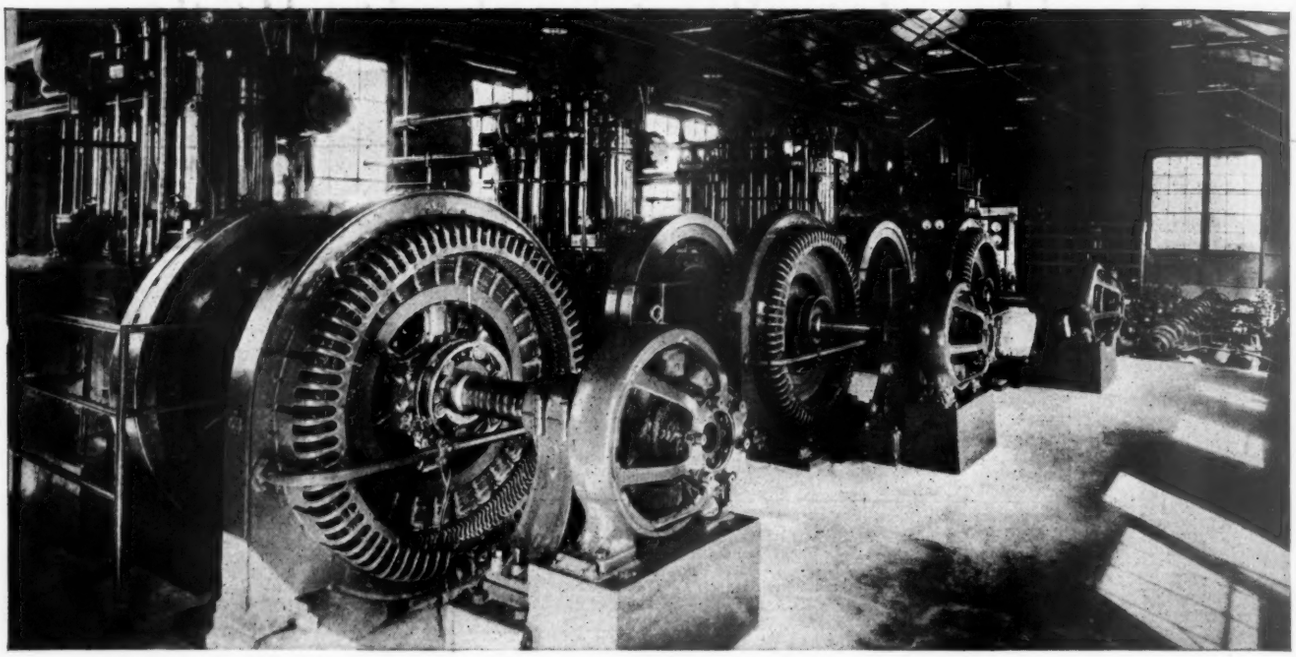


(Patent applied for)
McEVOY UNIVERSAL TUBING CONTROL HEAD
Ready for hook-up for flowing through tubing any size from 2" to 6-5/8", with casing 4½" to 13-3/8". Tested 2500 pounds per square inch.

J. H. McEVOY & COMPANY

HOUSTON, TEXAS, U.S.A.

Pacific Coast Branch: McEVOY SCREEN PIPE CO., 2428 E. 56 St., Los Angeles, Calif.



G-E generators in auxiliary power plants at Waskon compressor station

Dependable Electric Equipment

Serves the United Gas Company

Absolute dependability—so essential in pipe-line operation—prompted United Gas Company to select G-E electric equipment for its 1300-mile network of pipe lines.

The four compressor stations depend on General Electric generators, controllers, switchboards, pump motors, starter motors, and other apparatus to help keep the gas circulating through the network.

General Electric, which is prepared to meet every electrical requirement of the modern pipe line, considers it a distinction to have had a share in the engineering projects of the United Gas Company.

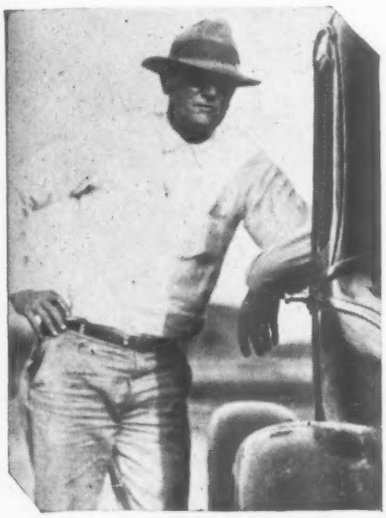
200-283

JOIN US IN THE GENERAL ELECTRIC HOUR, BROADCAST EVERY SATURDAY AT 8 P.M., E.S.T. ON A NATION-WIDE N.B.C. NETWORK

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

WITH THE MEN IN THE FIELD
United Gas Company and Subsidiaries



J. H. Wells, production superintendent of Saxet Oil Company's holdings at Refugio

George Wright, chief repairman, and Robert Lee Delaney, office man and meter inspector of Houston Gulf Gas Company's compressor station at Edna

R. W. Haney, auxiliary engineer, Dixie Gulf Gas Company's compressor station at Waskom

Left to right: R. R. Hess, engineer; C. F. Hoffman, engineer, and Carl Tatum, oiler; all of Houston Gulf Gas Company's Edna compressor station

Crew of Houston Gulf Gas Company's compressor station at Edna, Texas. Left to right: R. R. Hess, auxiliary engineer; Boyce McCord, repairman; C. F. Hoffman, engineer; Carl Tatum, oiler; D. G. Cooper, repairman; M. H. Milby, painter; C. L. Young, machinist helper; W. T. Barnhill, painter. All these men live on the company's lease and work during the day shift.

Crew of main compressor house, Dixie Gulf Gas Company plant at Waskom. Left to right: J. Watkins, oiler; R. Nelson, oiler; C. A. James, repairman; H. S. Shanks, oiler; B. H. McDonald, engineer

Crew of compressor plant of Houston Gulf Gas Company at Refugio. Left to right: F. S. Young, repairman; J. A. Perry, chief engineer; O. F. Dahlstrom, oiler; R. C. Nagel, engineer; A. W. Underwood, relief man; E. C. Epperson, pipe line department; J. E. ("Chicken") Nowell, pipe line superintendent, Refugio

WITH THE MEN IN THE FIELD
United Gas Company and Subsidiaries

Omer Stevens, driller of Richland Production Company's Hemler 1 in Richland field, Louisiana, resting on a pair of Hickman tongs

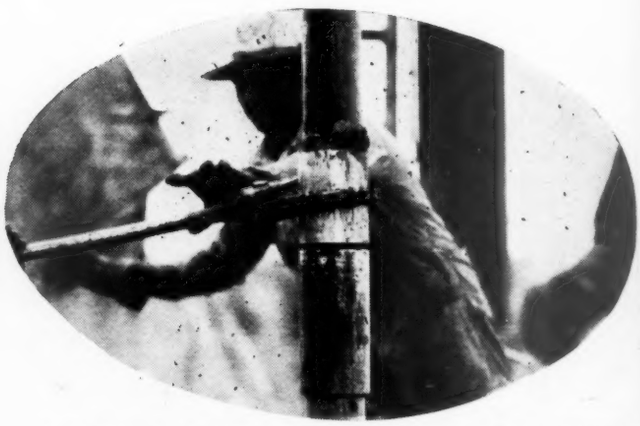
A. J. Lachle, superintendent Richland Production Company, Monroe, Louisiana. Lachle loves his job, but the Lord only knows what he'd do if the fish and bullfrogs of North Louisiana ever became extinct

J. E. Nowell, pipe line superintendent at Refugio for Houston Gulf Gas Company

George Blardone, director public relations for United Gas Company; Paul Wright, superintendent of construction for Dixie Gulf Gas Company, and M. T. Glass, land and lease man for Dixie Gulf Gas Company

Crew of Richland Production Company's J. A. Hemler 1 in Richland gas field, Louisiana. Left to right: A. G. Crawford, helper; T. D. Hunter, helper; F. Baggett, derricks; A. L. Young, pot man

A. J. Helfrick, pipe line foreman of Dixie Gulf Gas Company's Bethany compressor plant lease, chooses a "soft" seat on Linde Air Products drums which have been used up in welding work done during construction of the station



A. G. Crawford, helper, shows his title is not theoretical by yanking on the Vulcan tongs to help make up the drill pipe. Richland Production Company's J. A. Hemler 1

HOW many men buy an automobile on the basis of cold dollars-and-cents' analysis of the operating service it will deliver? If a man fails to choose the most efficient car for the money, the loss is his own and he receives no censure from anyone.

But in the purchase of gas engine and compressor equipment, no man can afford to let his choice be influenced by hunches, back-slapping or spontaneous enthusiasm.

Men who turn the searchlight of analysis on operating records and actual experiences of users invariably recommend the purchase of Cooper engines and compressors. And Cooper buyers are in the majority.

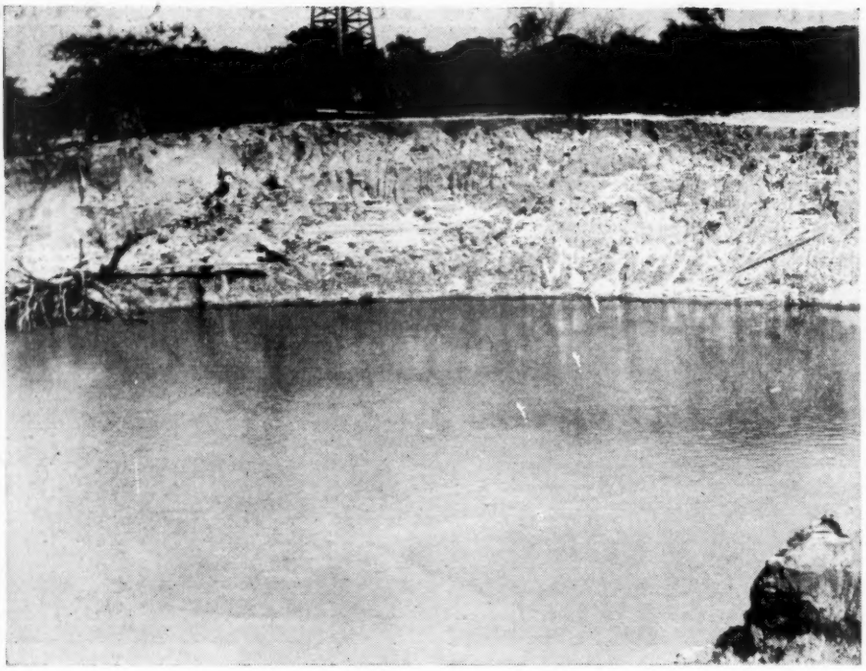
THE COOPER-BESSEMER CORPORATION

Formerly The G. & G. Cooper Company and The Bessemer Gas Engine Company

MOUNT VERNON, OHIO — GROVE CITY, PA.

1116 Magnolia Bldg., Dallas — 630 E. 61st Street, Los Angeles — 615 Kennedy Bldg., Tulsa

YOU'RE ALWAYS SAFE IN CHOOSING A COOPER



Showing what can happen to a high pressure gas well in the Gulf Coast country of Texas if control is lost. This is the crater of Houston Gulf Gas Company's Lambert 1 at Refugio field. Derrick in background is the same company's Lambert 8

Formations in Coast Country Require Special Pressure Control

GAS sands in the Gulf Coast country of Texas are loose, generally speaking, and have a rock pressure which varies in different localities from 500 to 1700 pounds per square inch. This condition has called for development of pressure controls dissimilar in some respects to those utilized in fields elsewhere.

There is no such thing as a standard method for tying down high pressure wells in the Gulf Coast, for each operator has been convinced by experience that every well presents an individual problem. There are minor differences also in the arrangement of valves and high-pressure nipples on the Christmas trees. But in the main, the general procedure for tying down wells is more or less common to all coastal fields. It is about as follows:

Surface casing of either 12½-inch or 10-inch diameter is set and cemented from bottom to top as the first step in pressure control. After the gas sand is reached and the inner casing, which usually is of 8¼-inch or 6⅝-inch diameter, is set, common practice is to equip the surface casing with a bradenhead. This reduces the 12½-inch pipe to 8¼-inch or 6⅝-inch, or to such size pipe as may be used.

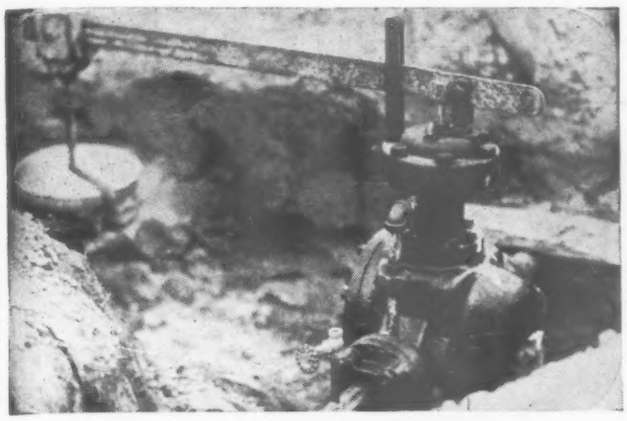
The master gate, which is placed on the inside string of pipe, then is anchored with heavy clamps. These clamps are placed underneath the 12½-inch or 10-inch collar of the surface casing and underneath the bradenhead. In some instances the master gate, by means of heavy anchor bolts, is tied down to a 25 or 30-ton concrete block which has been poured in around the surface casing.

After drilling on the well has been completed and it is ready to be brought in, the Christmas tree is placed on top of the master gate. It is clamped to the 12½-inch surface casing, or to the cement block if the latter has been used to anchor the master gate valve.

Gate valves placed on the main horizontal member of the Christmas tree, which are usually four in number, are closely tied down with anchor bolts and anchor clamps. A majority of these clamps, as used in the Gulf Coast territory of Texas and Louisiana, will measure about 1 x 4 x 33 inches. Practically all connections on the higher pressured wells in the territory are thoroughly clamped and tied in. It is necessary to follow this procedure in order to avoid a side-kicking or swaying of the hook-up structure and its resultant damage. Now the practice of using four gates on the side lines of the Christmas tree is for the assurance that there will always be at least one good gate valve with which to control the well. Gate valves closest to the casing are rarely ever used in the Gulf Coast except in emergency cases. They are supposed to be inspected regularly, however, and kept in first class condition. As the nature of gas sands in the coast country is to damage valves through passage of loose particles of sand through them, it is essential that the inside gate valves be kept in good condition so that the well may be under perfect control while the outside valves are being repaired or replaced.

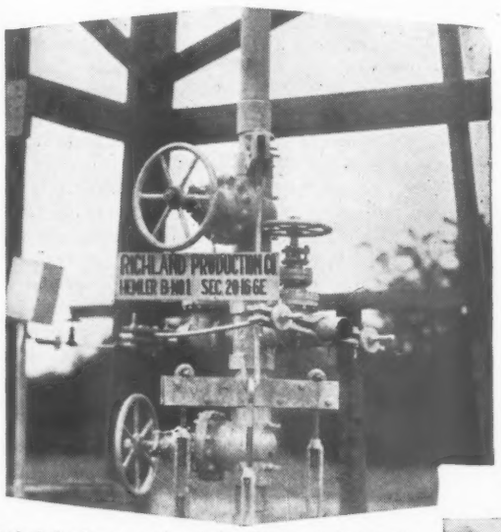
Certain steps are taken by most coastal operators to preserve the inner workings of gate valves. For example, it is almost standard practice to have small by-pass lines running around the master gate valve. This is a decided advantage on high pressure wells, for such an arrangement makes possible the equalization of pressure on each side of the gate. As long as the pressure on each side of the gate approaches a balance, the danger of breaking any of the inner working parts of the valves is considerably lessened. At the same time, presence of the by-pass lines around the master gate valve makes it possible to take pressure off the well in the event it is necessary to close the master valve.

Controlling Pressure in Texas Coast Gas Fields

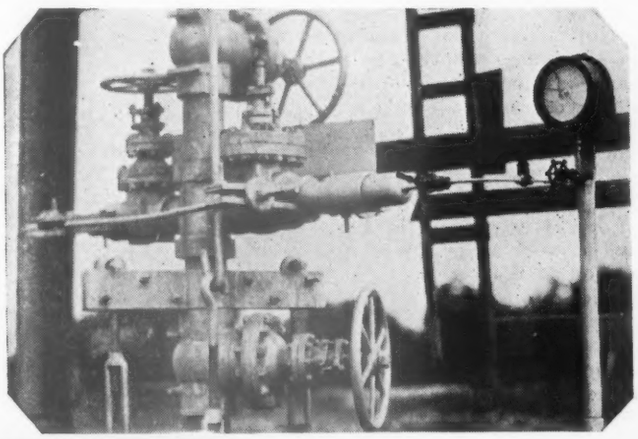


Emco regulator on Houston Gulf Gas Company's Rook 1 in Refugio field reduces the well's pressure from 1500 pounds to 500 pounds as it goes into line leading to Refugio compressor station

Gas coming through line from well in Refugio at 500 pounds pressure is reduced by this Chaplin Fulton regulator to 150 pounds before being released in main suction line leading to Houston Gulf Gas Company's compressor station at Refugio, Texas

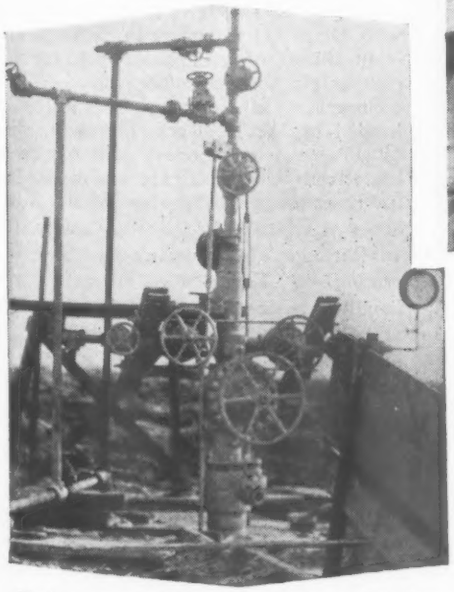


Typical hook-up employed by Richland Production Company in Richland gas field. Hughes high pressure valves. All wells of this company are painted with aluminum paint

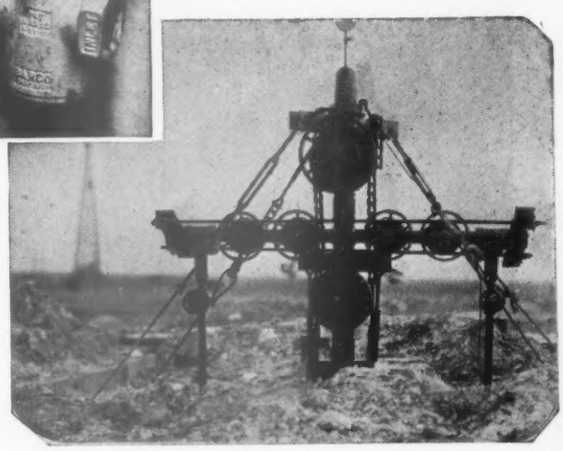


Showing hook-up on Richland Production Company's Hemler B-1, using Hughes valves and Bristol recording gauge

Louisiana laws require operators to use a lubricated stopcock on casinghead of each gas well in Richland field. Illustration shows Barco lubricated stop cock used by Richland Production Company on Hemler B-1

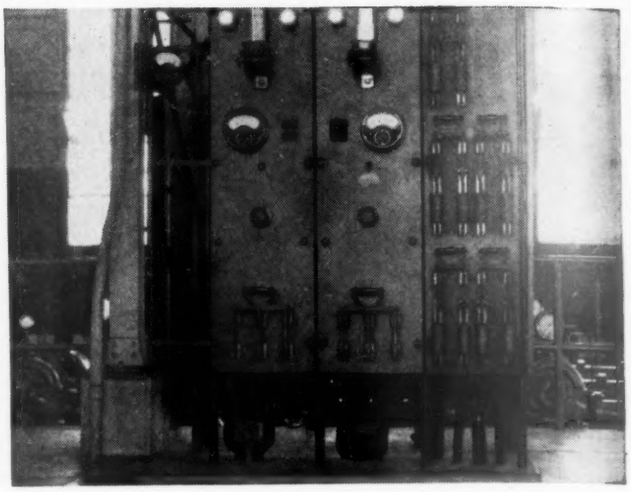


Christmas tree hook-up on Saxet Oil Company's Herd 6 at Refugio, showing Regan control head and Westcott high pressure valves



Houston Gulf Gas Company's Rook 1 at Refugio. All valves and hydraulic nipples by Westcott. Continental Supply Company gauges

Barrel rack for engine oil at Edna compressor station of Houstow Gulf Gas Company. Consolidated's heavy Deisel No. 1 is used



Switchboard controls all electric power distribution at Edna compressor station

(Continued from page 19)

the Waskom plant is rated at grade "AA".

Not far from the Waskom plant and in the same county, Dixie Gulf Gas Company has about finished construction work on a compressor plant at Bethany field. Bethany field is near the town of Bethany, in the heart of Jaybird Thicket. The Bethany compressor station is intended to take care of low pressure gas in Bethany field and to work as an adjunct to the large station at Waskom. It consists of six vertical Hope engines and compressors manufactured by the Cooper-Bessemer Corporation, Mt. Vernon, Ohio. The station has a rated horsepower of 960, in addition to the auxiliary equipment consisting of two 40-horsepower engines, products of the same manufacturer. The auxiliary engines are equipped with 25 kilowatt generators which will furnish power for operation of the plant.

Moody-Seagraves Co. Enters Mountain States

Houston. — Moody-Seagraves Company has invaded the Rocky Mountain oil territory having acquired an interest in the Cody Petroleum Company, according to an announcement Saturday. Cody Petroleum Company is drilling three wildcat wells in the Oregon basin at this time, and locations have been made for at least two more.

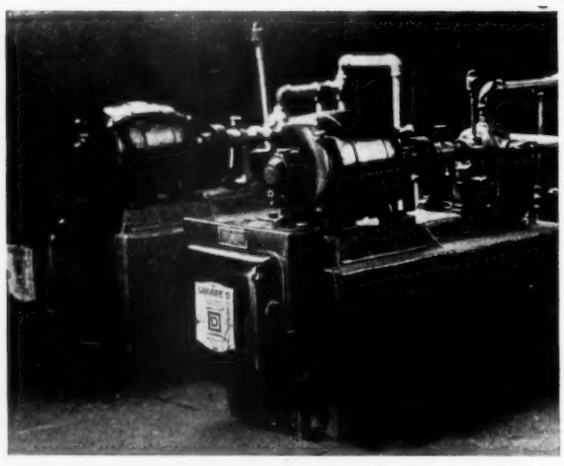
Moody-Seagraves Company has been identified with oil production in Texas for some time, operating under the name of the Moody Corporation, until it sold that organization to Superior Oil Company some months ago. The company now controls the Cody Petroleum Company, having secured an 80 per cent. interest in that property.

In addition to its interest in Cody Petroleum Company, the Moody-Seagraves Company has substantial interests in natural gas pipe lines, and the recovery, transportation and distribution of natural gas in North Louisiana and East and South Texas; they are also owners of much prospective oil acreage in South Texas.

Austin, Texas.—Superior Oil Company of California opened an operating office in Austin June 15, in charge of Charles A. Dore, vice-president and director. Rex B. Hendrix is in charge of the land department and C. E. Cook, formerly with the United North & South Development Company at Luling and more recently with Dixie Oil Company in West Texas, is in charge of geological work for the company in the new office.

Superior Oil Company of California, headed by W. M. Keck, president, with M. P. Jones as secretary and treasurer, has already blocked up approximately 50,000 acres along the Balcones Fault, 35,000 acres of which is in Bastrop County, for wildcatting. The company has been operating in Texas for several years, handling business out of a district office at Midland. The Midland office, which is in charge of Lon D. Cartwright, Jr., will be under the state office at Austin in the future. The company has some production in Crane County.

Associated with Superior Oil Company's Austin office, which is located in the Elks building, is the Pacific Oil & Royalty Company, owner of considerable West Texas and New Mexico royalty. Superior Oil Company of California is the first producing concern to maintain an office in Austin.



The cut at the left, shows VIKING OIL PUMPS, in the Auxiliary house of the HOUSTON GULF GAS CO.'S compressor station at Refugio.

These pumps are used for Lubricating Oil circulation and distribution to the HOPE engines in the main compressor house.

Located, midway between the two greatest gas producing territories in the world, we are in a position to serve the Natural Gas operators quickly and effectively.

We shall appreciate an opportunity to supply you with your pumping equipment, refrigeration, power units, compressor equipment and other items. Complete stocks carried in Houston.

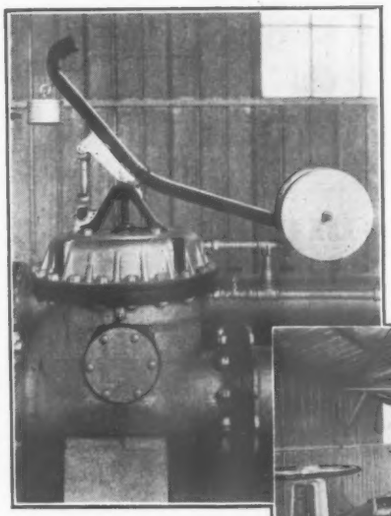
SOUTHERN ENGINE & PUMP COMPANY.

615 Washington Avenue HOUSTON, TEXAS

Where quality counts

Houston town border stations–EMCO equipped

EMCO–wherever you go



8-Inch EMCO Automatic Valve

Clinton Road Station

Almeda Station

The EMCO High Pressure Regulators, Dead Weight Safety Seals, and Automatic Valve shown above control the flow of gas at the Houston town border regulator stations.

PITTSBURGH EQUITABLE equipment was chosen for these stations because of the quality and accuracy for which the name EMCO stands.

For reliable service and accurate measurement consult the House of EMCO and your regulation or metering problems will be solved.

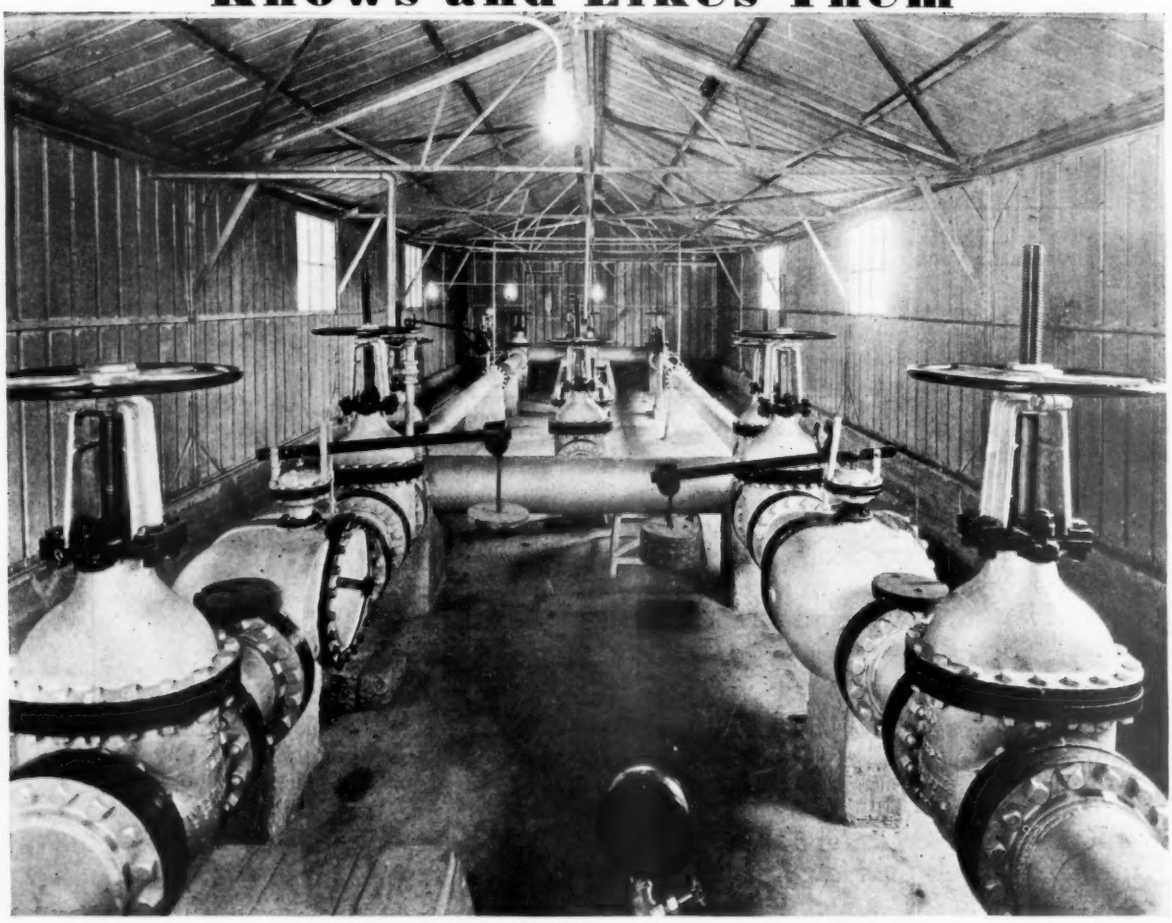
PITTSBURGH EQUITABLE METER COMPANY

MAIN OFFICE AND WORKS PITTSBURGH, PA.

NEW YORK CHICAGO COLUMBIA, S.C. LOS ANGELES DALLAS
TULSA SEATTLE KANSAS CITY SALT LAKE CITY

WESTCOTT VALVES

The United Gas Company Knows and Likes Them



The above shows an installation of Westcott Valves in the Clinton Road Town Border station of the Dixie Gulf Gas Company (a United Gas subsidiary) at Houston, Texas

"If Continental Sells It . . . There Is No Better"

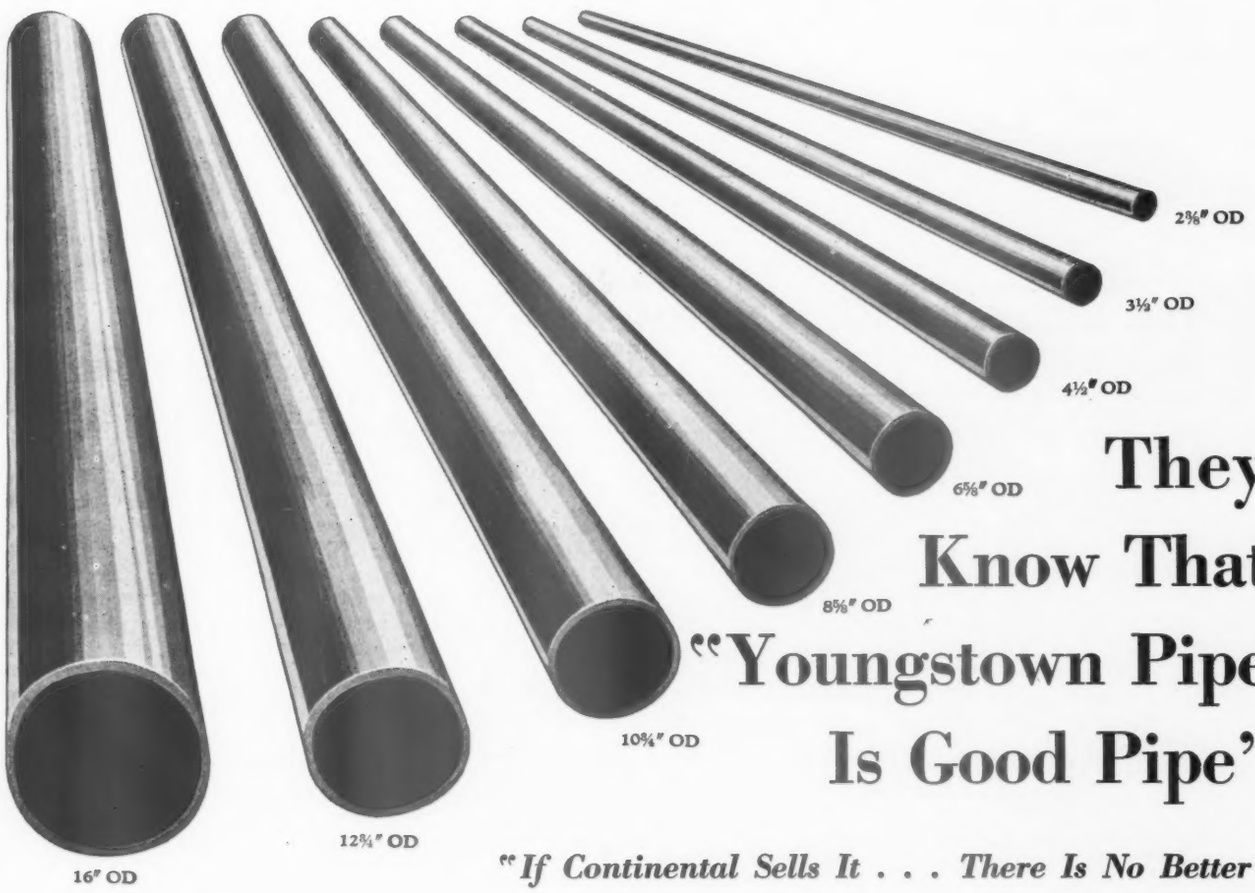
THE CONTINENTAL SUPPLY CO.
General Offices: ST. LOUIS
Export Offices: 74 Trinity Court, New York
London Offices:
316-17 Dashwood House, Old Broad St., E. C. 2

The Continental Supply Co., Ltd.
411 Lancaster Bldg., Calgary, Alberta, Canada.

CONTINENTAL

Over 500 Miles of YOUNGSTOWN LINE PIPE

Bought by the United Gas Co. Since Jan. 1, 1928



They Know That "Youngstown Pipe Is Good Pipe"

"If Continental Sells It . . . There Is No Better"

THE CONTINENTAL SUPPLY CO.

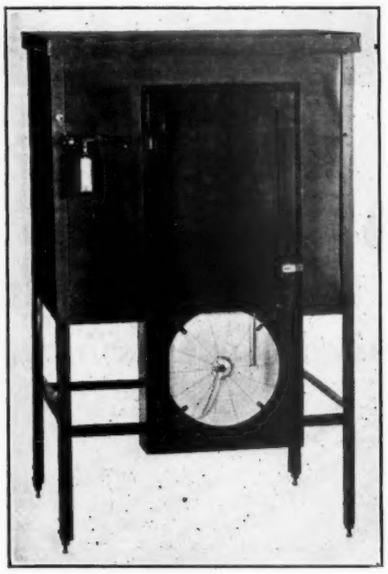
General Offices: ST. LOUIS. *Export Offices:* 74 Trinity Court, NEW YORK
London Offices: 316-17 DASHWOOD HOUSE, Old Broad Street, E. C. 2

THE CONTINENTAL SUPPLY CO., Ltd.
411 LANCASTER BLDG., CALGARY, ALBERTA, CANADA

CONTINENTAL

A New and Improved
Recording Gravitometer

Designed to give accurate corrected gravities of natural, artificial or mixed gases. It is a rugged, dependable instrument which is easily and economically operated. Numbers of instruments now in operation giving satisfactory results and aiding in the Accurate Measurement of gas.

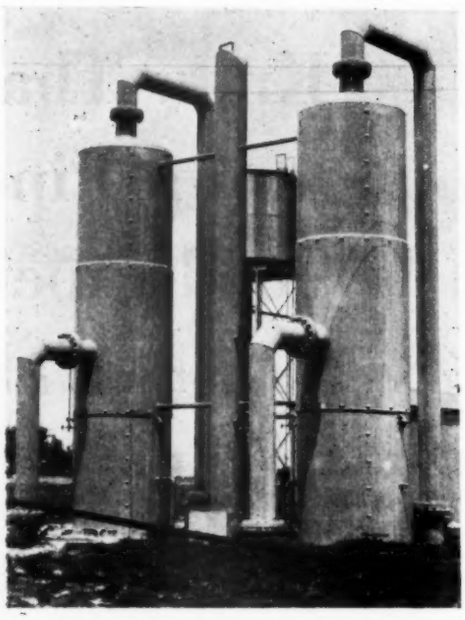


Gas Testing Appliances
Gas Gravity Balance
Vacuum Pressure Pump
Repair Department for
Hays Gas Analyzers
Meriam Manometers

THE R.S.C. TULSA — SERVICE ACCURACY

RECORDING GRAVITOMETER
—the last word in Gas Testing Appliances.
Write for detailed information.
Bulletin No. 2A.

Largest Scientific Material House in the Southwest
THE REFINERY SUPPLY COMPANY
621 East Fourth Street, TULSA, OKLA.
3404-06 Main Street, DALLAS, TEXAS



Acme Gas Cleaners

Remove Sand, Pipe Scale, Dust, Water, etc., From Natural Gas Lines, Protecting Compressors, Regulators and Meters.

Used by the Largest Companies.

Write For Full Information

Recent Installation on United Gas Company Properties

Houston or Dallas Shipment

Acme Gas Cleaner Company
3406 MAIN ST. DALLAS, TEXAS

United Gas Becomes International Unit

Houston.—In signing a contract with Smith Brothers Construction Company of Dallas, to lay a 12¾-inch (O.D.) gas line from the Jennings field, in Zapata County, to Monterrey, Mexico, 125 miles, United Gas Company takes on an international status in its distribution of natural gas. Right-of-way has been secured. The pipe was ordered from Youngstown Sheet & Tube Company.

This international line of the United Gas Company will cross the Rio Grande at Roma, Texas, and proceed from that point almost on an air line to Monterrey on the southwest. United Gas Company has organized a Mexican subsidiary to carry on the business on the Mexican side of the river. This company, Cia Mexicana de Gas S. A., has contracted to deliver gas to the local distributing company at Monterrey for domestic consumption. In addition, Cia Mexicana de Gas S. A., is making contracts with the major industrial fuel users in and juxtaposed to Monterrey, whom it will supply direct.

The line will have a maximum capacity of 30,000,000 cubic feet daily. A compressor station will be constructed at San Pedro de Roma, on the southern bank of the Rio Grande, opposite Roma, Texas, and the line should be in service by the latter part of the year.

Drilling Subsidiaries of United Gas Are Active

Operations of the two subsidiaries of the United Gas Company, active in the Refugio field, Refugio County, as of June 22, is best described as follows: Houston Gulf Gas Company's Ryals 4 is showing for an oil well from seven feet of sand topped at 3663 feet, total depth 3670 feet. The test made six fourbles of oil from this sand, and it is now shut down waiting for 8¼-inch casing to set at the top of the sand. Ryals 4 is a direct north offset to the Oigufer Oil Company's Ryals 1, which is an oil producer. Both locations are in the central east flank of the field. Houston Gulf Gas Company's other operations follow: Its Lambert 9 is drilling in shale at 1580 feet; Shelly 6 is in sandy shale at 3793 feet; Rose Lambert 3 is a derrick; Adkins 3 is coring a sand at 3534 feet; Buckley 1 is preparing to drill; Rooke 2 has fished out lost drill pipe and is running in to resume drilling from 4530 feet. The latter is a deep test on the extreme western edge of the field.

Mission Drilling Company, United Gas Company's other subsidiary at Refugio, swabbed in through tubing a big gasser at a total depth of 3642 feet, and is killing the gas to feel ahead for an oil sand in the 3700-foot level. Its Huddleston 1 has cemented 8¼-inch casing on top of an oil sand encountered at 3645 feet, total depth 3653 feet; its Powers 1 is sidetracking at 3100 feet; its O'Brien 1 is in gumbo at 2502 feet, and Mission Drilling Company is swabbing its J. F. B. Heard, which came in a gas well some weeks ago has been showing some oil, at 3657 feet.

DRESSER COUPLINGS *Were Used!*

Dresser Couplings were chosen for the construction of the pipe line systems shown in the above map. As usual they have been found to be strong, flexible and durable and most satisfactory in every respect.

S. R. DRESSER MANUFACTURING CO.,
Bradford, Pennsylvania

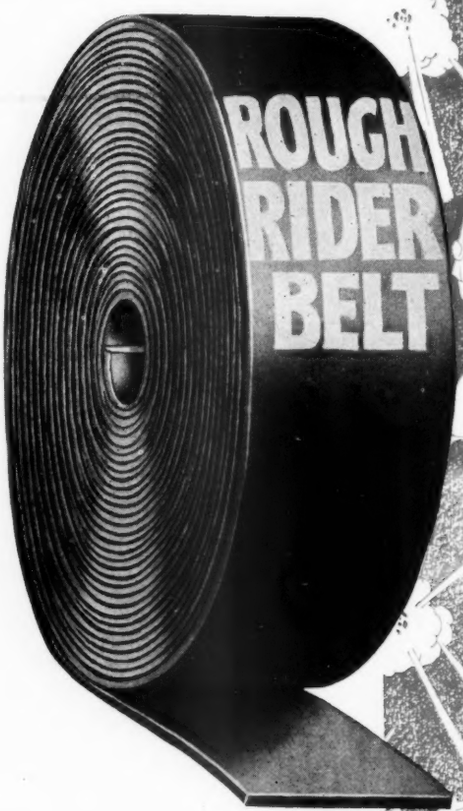
A GREAT LINE

Led by—

Rough Rider

Rough! Tough! Never Get Enough!

(The Battle Cry of the Rough Riders)



Rough Rider Belt

Rough Rider Rotary Hose

Rough Rider Steam Hose

Wilcox Special Rotary Hose

Wilcox Special Belts

Severe Service Brands of Belting Hose and Packing

Manufactured by
THE MECHANICAL RUBBER CO.

"If Continental Sells It . . . . . There Is No Better"

THE CONTINENTAL SUPPLY CO.
General Offices: ST. LOUIS. *Export Offices:* 74 Trinity Court, NEW YORK
London Offices: 316-17 DASHWOOD HOUSE, Old Broad Street, E. C. 2

THE CONTINENTAL SUPPLY CO., Ltd.
411 LANCASTER BLDG., CALGARY, ALBERTA, CANADA

CONTINENTAL

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Another Gain of 20,000 Barrels in California Production

TALKING about overproduction in California is becoming a matter of routine, but there is nothing else to talk about since that state seems to be determined to break all records. The fact that all curtailment effort has been abandoned in California is of no immediate consequence, as it is seriously doubted whether curtailment was ever in effect there. Last week, Santa Fe Springs production showed a gain of 24,000 barrels daily while Seal Beach and Elwood registered gains of 3000 and 400 barrels, respectively. On the whole, the state showed a net gain of 20,200 barrels, compared with a gain of 21,250 barrels for the entire United States. These figures prove that California is a real threatening factor in the United States petroleum situation. Outside of California, crude production showed a gain of only 950 barrels for the week ending June 22, according to estimates of the American Petroleum Institute.

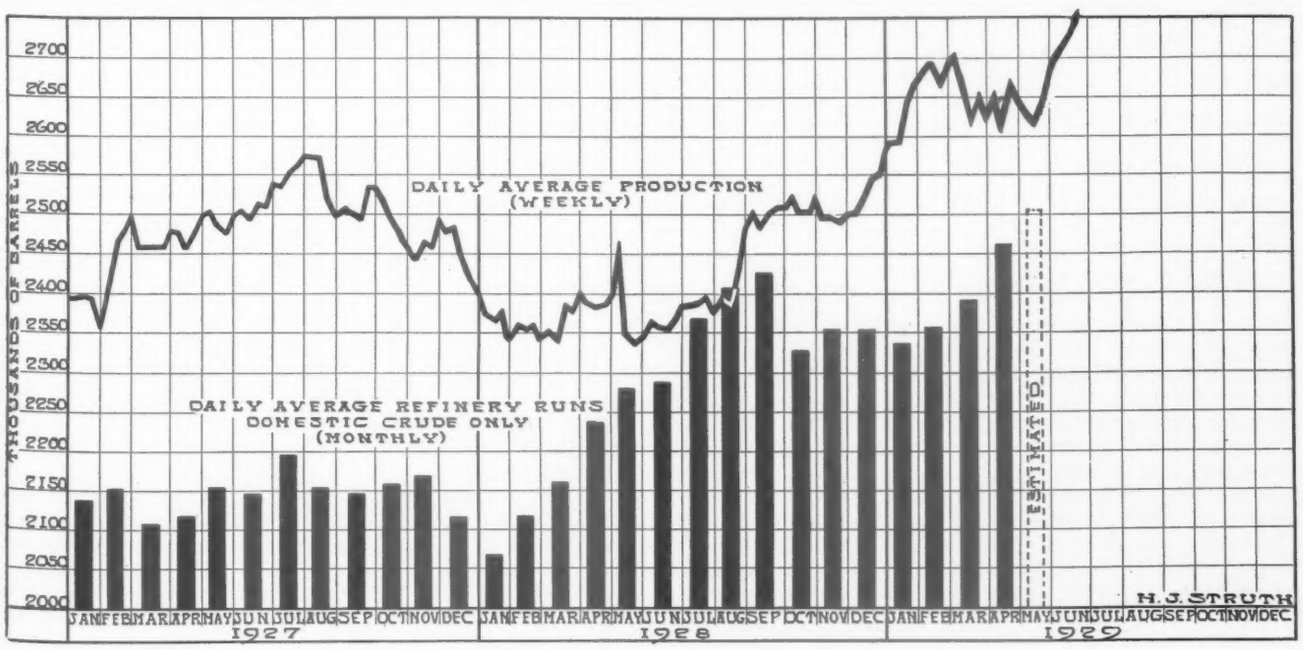
HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH AVERAGE OF 1928

	Daily Av'ge Year 1928 (Bureau of Mines Data)	Daily Av'ge June 22,1929 (A. P. I. Wkly Prod. Rept.)	Excess
Oklahoma-Kansas	786,585	801,050	14,465
Texas-Louisiana-Arkansas	849,205	940,200	90,995
California	633,831	835,500	201,669
Balance of United States	190,391	187,750	**2,641**[1]
Total United States	2,460,012	2,764,500	304,488
Mexico-Central and South America	561,339	609,249[2]	47,910
Grand total	3,021,351	3,373,749	352,398

[1]Bold figures indicate below 1928 average.
[2]As of March 30, 1929—latest date available.

Compared with the daily average of last year, California's excess daily production is now 201,669 barrels, whereas the total excess of the entire United States is now 304,488 barrels. Since the first week of January, 1929, California has shown a net gain in daily average production of 120,900 barrels, while the net gain for the balance of the United States for the same period amounts to 52,550 barrels. As a result of the consistent gains recorded in California the total daily production of the United States has again reached a new high level, touching a total of 2,764,500 barrels. In the face of all this, California operators are said to be most optimistic over the future outlook. Apparently, the fact that a few companies are buying crude in the open market suggests that market requirements are unlimited, but those who are inclined to that belief

DOMESTIC PRODUCTION AND REFINERY RUNS



Details on Critical Fields

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	587	3,066,065	5,223	601	143,805	239*	4	21
Church & Fields	189	203,465	1,077	186	24,815	133	4	1
Gulf-McElroy	75	57,530	767	74	12,875	174	1	2
Yates	318	2,102,030	6,610	310	105,675	341*	9	8
Totals	1,169	5,429,090	4,644	1,171	287,170	245	18	32
TEXAS PANHANDLE:								
Gray County	381	209,690	550	366	55,500	152	38	82
OKLAHOMA—								
Seminole	2,036	2,376,407	1,167	1,587	291,821	183	18	117
St. Louis	453	422,108	931	365	84,706	232	31	71
CALIFORNIA—								
Santa Fe Springs**	228	792,300	3,475	128	230,000	1,797	24	209

*Production partially pinched.
**Includes deep zone production. For field total add 217 wells and 24,000 barrels.

will shortly find that they are only "kidding" themselves. Regardless of what may be alleged to be the outlook for California, the fact remains that present prices in that state cannot be maintained for very long if production continues to climb. While there may be a good demand for light oil in California, it is noted that stocks of that grade of oil are piling up rapidly and offer concrete evidence of the fact that the state is greatly overproducing.

Santa Fe Springs—A Shadow

Santa Fe Springs continues to cast a shadow on the oil horizon, although many are of the opinion that the present stride cannot be maintained for more than a few weeks hence. If the peak of that field, estimated at 300,000 barrels, should prove to be the turning point, there will undoubtedly be a succession of marked declines in production there. However, it is deplorable that it should be necessary to ruin such a prolific oil area just because of unwillingness of competitive companies to adopt cooperative curtailment measures.

As matters stand now, the only salvation for California lies in the early realization of Santa Fe Springs' peak and a consequent rapid decline in the settled production of that field.

Unless that happens soon, there will only be one recourse: Slash the posted price of California light crude!

Whether such action is expected or not will have no bearing upon the matter; it will merely constitute the infallible functioning of the economic law of supply and demand.

Optimism cannot support the crude market in California when production is exceeding all economic limits. Perhaps the chief reason for the optimism there is the fact that it is comparatively easy to make a profit in the refined oil market. This situation reflects the improvement of other sections, however, rather than an improved condition in the California supply situation.

Declines Elsewhere

Outside of California, the increases in production were inconsequential. Oklahoma and Kansas showed gains of 4950 barrels and 600 barrels, respectively, while Texas, Gulf Coast, North Louisiana, Arkansas and Rocky Mountain states showed declines which aggregated 4900 barrels. Gains registered in Oklahoma were attributed to Little River, 1850 barrels, Earlsboro, 3100 barrels and St. Louis, 1400 barrels. While Texas, outside of the Gulf Coast, showed a decline of 900 barrels, Gray County, in the Texas Panhandle, registered a gain of 7650 barrels, reflecting the drilling campaign that has been under way there for the past few weeks. Salt Flat, in Southwest Texas, also showed a gain of 1800 barrels. These gains were more than offset by declines in the West Texas area. The Eastern states showed a small gain of 400 barrels.

Relief from over-production in California has been "just around the corner" for several months, but the stern realization that the state is now producing more oil than at any time for several years is beginning to stare the industry in the face when it least wants to "face the music."

Figures just released by the Pacific Coast office of the A. P. I. show that total stocks of crude and all products in California increased 4,413,518 barrels during May. Refinable crude, 20 degrees A. P. I. and lighter, increased 2,688,761 barrels, bringing the amount in storage to 30,455,000 barrels, as compared with 19,875,000 barrels at the same time last year. Heavy oil stocks, including all grades of fuel, increased 1,021,600 barrels during the month, bringing the total storage of this grade to 102,921,746 barrels. With a decrease of only 4984 barrels, gasoline stocks remained practically unchanged at the end of month. The total of all California stocks stands at 159,794,809 barrels, as compared with 140,065,459 barrels at the same time last year.

Curtailment made little headway in the critical fields of the state, shutin production not exceeding 75,000 barrels.

The lid has been pretty well off at Santa Fe Springs and production is soaring steadily. The O'Connell zone is proving to be much better than originally thought and large wells are the rule, rather than the exception. About 30 wells will be completed within the next three weeks and no relief is in sight for at least a month. The decline will be fairly slow, due to thickness of the O'Connell zone.

Gasoline consumption in Pacific Coast States is breaking all records, but the supply is still equal to the demand.

Oklahoma Situation

While Oklahoma is temporarily enjoying the fruits of an improved crude oil market, indications are that by fall the territory may perhaps be back in the old rut of over-production.

St. Louis district, or township 7-4, is looming as a big market factor. Recent developments in this region are causing many new tests to be commenced. Within 60 days a material increase in production is likely. This territory offers production possibilities in three formations. Many believe that big Wilcox sand production will be found at some place in the area, which lies between St. Louis and Pearson. If this occurs St. Louis is likely to be very troublesome

The buying demand for U. S. Motor gasoline has been very slow in the Group 3 territory. Jobbers have evidently been delaying shipping instructions with the view of breaking down the market. This they have partly accomplished by some distress gasoline being placed on the market at 8¾ cents a gallon. However, the larger refiners

have steadfastly held to the 9¼ cent quotation.

Next week is expected to see the jobbers in the market for gasoline, since they can hardly have purchased enough gasoline in May to carry them much longer. If jobbers come back into the market in strong numbers, all of the possible distress stuff will be removed, including much additional gasoline, and the general refined market will be in a strong position in Oklahoma.

Harper Gets Shallow Oil Strike in Hill County

Mexia, Texas.—A shallow oil strike made in Southeastern Hill County last week gave promise of a commercial pumper when given production tests from broken Austin chalk formation at 692-700 feet, thus establishing a new pool about 25 miles northwest of Mexia. The discovery well was drilled by J. A. Harper and associates on the J. T. Jones 60-acre farm, A. C. Graves survey, and when put on pump June 21 made 55 barrels of 33 degree gravity oil, three per cent. water, during first four hours. During the first 24 hour gauge the well is credited with having pumped 125 barrels, and about 85 barrels on the second day, thus indicating a commercial producer in its present status.

This well is far removed from established fields, or pools, and is located about one-half mile west of the town of Mount Calm, where a banquet was tendered the owners of the well and the drilling crew by local business men on the night of the initial pumping test. The Austin Chalk formation was encountered at 640 feet, and the oil was encountered in sandy streaks found in this formation body. A string of 6⅝-inch casing with a perforated joint was set on bottom to shut off the upper water before making the pumping test.

Carter Takes Leases in North Kansas

Tulsa. — Carter Oil Company has taken a block of approximately 20,000 acres near Marysville, in Marshall County, northern Kansas. Leasing and blocking in northern Kansas is increasing, with many of the major companies entering the district.

Sugarland

Houston. — Humble Oil & Refining Company's latest completion at Sugarland, Fort Bend County, was Brazos Farms 6. It came in for 175 barrels initial production at 3475 feet. It is not an extension of the productive area, being located in the south part of the present field, 300 feet west of Humble Oil & Refining Company's Nelson 1.

Officers For A. P. I. Engineering Division

Dallas.—National officers of the American Petroleum Institute, division of development and production engineering, recently elected to serve during 1929, include the following: General chairman, John R. Suman, Humble Oil & Refining Company, Houston; vice-general chairman, T. E. Swigart, Shell Oil Company, Los Angeles; executive secretary, C. A. Young, Dallas.

District officers elected at the same time include those for the Eastern States and for California. For the eastern district the following men were elected: Chairman, E. L. Estabrook, Pan-American Petroleum and Transport Company, New York; vice-chairman for Pennsylvania and West Virginia, J. French Robinson, Peoples Natural Gas Company, Pittsburgh; vice-chairman for Kentucky, Gordon N. Campbell, Swiss Oil Corporation, Lexington; vice-chairman for Ohio, Illinois and Michigan, John C. Askam, Ohio Oil Company, Findlay, Ohio; secretary, H. H. Hill, Standard Oil Development Company, New York.

For the California district, the following officers were elected: Chairman, A. C. Rubel, Union Oil Company of California, Los Angeles; vice-chairman, W. W. Copp, Marland Oil Company of California, Los Angeles; secretary, Martin Van Couvering, Los Angeles; treasurer, William F. Huff, National Supply Company of California, Los Angeles.

Chairmen of national committees elected at the same time include the following: Program and publications, F. W. Lake, Union Oil Company of California, Brea, California; drilling practice, R. E. Collom, Marland Oil Company of California, Los Angeles; production practice, E. O. Bennett, Marland Oil Company, Ponca City, Oklahoma; prime movers, F. E. Richardson, Marland Oil Company, Ponca City, Oklahoma; metallurgy, H. W. Fletcher, Hughes Tool Company, Houston; research, W. P. Haseman, Oklahoma City; well records and nomenclature, A. C. Rubel, Union Oil Company of California, Los Angeles.

A. P. I. Plans Fall Meet of La.-Tex.-Ark. District

Dallas.—Preliminary plans for the fall meeting of the Texas-Louisiana-Arkansas district of the American Petroleum Institute's division of development and production engineering, to be held in Galveston September 5 and 6, provide for discussion of subjects suggested by situations which were called to the attention of those attending the spring meeting of the same district in Dallas.

The morning session of September 5 will be devoted to papers and discussion on the following subjects: "Standardization of Electric Power Rate Structure for Drilling and Production," "Centrifugal versus Reciprocating Pumps for Gathering Oil," "Metallurgy of Drilling Tools."

Following the above, in the afternoon there will be papers and discussion on "Weighing and Counterbalancing Wells," "Proper Care of Sucker Rods," "Methods of Waste Water Disposal."

September 6 will be devoted to "Penalty of Crooked Holes," a continuance of the informative discussion which started in the spring meeting and "Drilling Vertical Holes."

The afternoon of September 6 has been set aside as that portion of the meeting time to be devoted to entertainment of those attending the meeting.

The above outlined program is only tentative and preliminary. A. S. Field, district chairman, is anxious to get reactions of those interested in the district's work to the program as outlined. Suggestions or inquiries regarding the plans should be addressed to him at the Shell Petroleum Corporation, Athletic Building, Dallas.

California Division A.P.I. Program Announced

Los Angeles.—Preliminaries to the June meeting of California section of division of development and production engineering of the American Petroleum Institute got under way June 26 with a meeting of the national executive committee, John R. Suman, national chairman, presiding.

The following program has been arranged: June 27, nine to ten a. m., registration at Biltmore hotel, followed by address of welcome by Chairman A. C. Rubel; 10 to 12, technical session under auspices of California drilling committee, Wendell M. Jones presiding.

Papers of this session will be: "California Casing Practice," by J. V. Kimber, and "Latest Developments in Casing and Casing Joints," by C. J. Coberly.

The afternoon session will be under auspices of the California drilling committee on production, Francis Lake, presiding. The following papers will be read: "Sub-surface Pumping Equipment," by E. E. Stevenson; "Surface Equipment for Pumping Wells," by J. H. Wallace; "Economic Operation of Small Wells," by A. C. Dyer; "Effective Pumping of Large Wells," by H. T. Wyatt.

A field trip by airplane or auto has been arranged for the morning of June 28. A golf tournament will be held during the afternoon.

Loop Beggs-Mounds Line

Tulsa. — Mid-Continent Petroleum Corporation is looping its line from Mounds to Beggs. This pipe line runs to the Seminole district. The loop is being constructed of six-inch pipe.

Big Hill Gas Well

Houston. — At Big Hill, Jefferson County, The Texas Company has made a gas well of its Pipkin 1 at 5958 feet. The pressure of the well is 200 pounds.

CRUDE OIL PRICE QUOTATIONS

Revised June 25, 1929

EASTERN STATES
(Effective March 12, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$4.10
Brandford District Oil in National Transit Lines (Pennsylvania)	4.10
Penna Grade Oil in National Transit Lines (Pennsylvania)	4.00
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	4.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.35
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.75
Somerset Oil in Cumberland Pipe Line lines (Kentucky)	1.80
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (Effective Jan. 29, 1929)	.60
Keister (Pennsylvania)	1.20

CENTRAL STATES
(Effective May 21, 1929)
Posted by Ohio Oil Co.

Illinois	1.75
Indiana	1.57
Lima	1.80
Plymouth	1.28
Princeton	1.75
Waterloo	1.25
Wooster	1.90

MID-CONTINENT
(Effective May 21, 1929)
Magnolia Petroleum Company

Under 26	.70
26 to 26.9 gravity	.75
27 to 27.9 gravity	.85
28 to 28.9 gravity	.90
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.05
31 to 31.9 gravity	1.15
32 to 32.9 gravity	1.25

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

MID-CONTINENT
(Effective May 20, 1929)
Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.

25 to 25.9 gravity	.90
26 to 26.9 gravity	.95
27 to 27.9 gravity	1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 and above	1.85

WESTERN KENTUCKY

All grades	1.83

PANHANDLE
(Effecive May 20, 1929)
GRAY COUNTY
(Humble Oil & Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company.

Below 29 gravity	.90
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.00
31 to 31.9 gravity	1.05
32 to 32.9 gravity	1.10
33 to 33.9 gravity	1.15
34 to 34.9 gravity	1.20
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.30
37 to 37.9 gravity	1.35
38 to 38.9 gravity	1.40
39 to 39.9 gravity	1.45
40 to 40.9 gravity	1.50
41 to 41.9 gravity	1.55
42 to 42.9 gravity	1.60
43 to 43.9 gravity	1.65
44 and above	1.70

WHEELER COUNTY
(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.90
30 to 30.9 gravity	.95
31 to 31.9 gravity	1.00
32 to 32.9 gravity	1.05
33 to 33.9 gravity	1.10
34 to 34.9 gravity	1.15
35 to 35.9 gravity	1.20
36 to 36.9 gravity	1.25
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.35
39 to 39.9 gravity	1.40
40 to 40.9 gravity	1.45
41 to 41.9 gravity	1.50
42 to 42.9 gravity	1.55
43 to 43.9 gravity	1.60
44 and above	1.65

CARSON-HUTCHINSON COUNTIES
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.90
32 to 32.9 gravity	.95
33 to 33.9 gravity	1.00
34 to 34.9 gravity	1.05
35 to 35.9 gravity	1.10
36 to 36.9 gravity	1.15
37 to 37.9 gravity	1.20
38 to 38.9 gravity	1.25
39 to 39.9 gravity	1.30
40 to 40.9 gravity	1.35
41 to 41.9 gravity	1.40
42 to 42.9 gravity	1.45
43 to 43.9 gravity	1.50
44 and above	1.55

SOMERSET
Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

CALIFORNIA CRUDE OIL PRICES AT THE WELL
(EFFECTIVE JANUARY 18, 1929)

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons infields indicated)

Gravity	Ventura *	Signal Hill	Alamitos Heights-Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood † Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elks Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .85	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .50	$ .50	$ .50	$ .50	$ .50	$ .50
15-15.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
16-16.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
17-17.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
18-18.9	.85	.75	.75	.75	.75	.75	..	..	.75	.75	.75	.70	.75	..	.50	.56	.56	.56	.56	.56
19-19.9	.85	.80	.80	.80	.80	.80	..	..	.80	.80	.80	.75	.80	..	.50	.62	.62	.62	.62	.62
20-20.9	.85	.85	.85	.85	.85	.85	..	..	.85	.85	.84	.80	.84	..	..	.68	.68	.68	.68	.68
21-21.9	.86	.89	.89	.89	.89	.89	..	..	.89	.89	.88	.85	.88	.89	..	.74	.74	.74	.74	.74
22-22.9	.87	.93	.93	.93	.93	.93	..	..	.93	.93	.91	.90	.91	.92	..	.80	.80	.80	.80	.80
23-23.9	.90	.97	.97	.97	.97	.97	..	..	.97	.97	..	.95	.94	.95	..	.85	.85	.85	.85	.85
24-24.9	.94	1.01	1.01	1.01	1.01	1.01	1.01	..	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	.98	1.05	1.05	1.05	1.05	1.05	1.05	..	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.02	1.09	1.09	1.09	1.09	1.09	1.09	..	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.06	1.13	1.13	1.13	1.13	1.13	1.13	..	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.10	1.17	1.17	1.17	1.17	1.17	1.17	..	1.17	1,17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.14	1.21	1.21	1.21	..	1.21	1.21	..	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.18	1.25	1.25	1.25	..	1.25	1.25	..	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.23	1.30	1.30	1.30	..	..	1.30	..	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.0	1.28	1.35	1.35	1.35	..	..	1.35	..	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
32-32.9		..	..	..	..	..	1.41	..	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9		..	..	..	..	..	1.47	1.16	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9		..	..	..	..	..	1.53	1.22	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9		..	..	..	..	..	1.59	1.28	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9		..	..	..	..	..	1.65	1.34	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9		..	..	..	..	..	1.71	1.40	..	..	..	..	..	1.60	..	..	..	..	..	..
39-39.9		..	..	..	..	..	1.77	1.46	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40.9		..	..	..	..	..	1.83	1.52	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9		..	..	..	..	..	1.89	1.58	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9		..	..	..	..	..	1.95	1.64	..	..	..	..	..	..	..	..	..	..	..	..

KETTLEMAN HILLS—55 degree Gravity and above $1.65 per barrel. *Union Oil Company. †Changed March 18, 1929.

(See Page 94)

The Official Oil Doctor *protects you* Against Costly Experimenting

Elimination of costly, time-consuming experiments is one of the many features of the Official Oil Doctor service which is of definite value to you.

With a complete equipped laboratory containing every conceivable type of apparatus for this work; and a staff of petroleum engineers of long, practical experience; he is capable of solving the most difficult "cut oil" problems with dispatch—insuring the unqualified success of the process required for your particular production *before* investing one cent in treating plant equipment.

"Petreco" is indeed a *certified* service. For you cannot obtain a "Petreco" Electric Dehydrating plant under any conditions except assured, specific results.

Ask for details of plants now in operation and our booklet: "The Electrical Process for the Dehydration of Crude Oil Emulsions."

PETROLEUM RECTIFYING COMPANY of CALIFORNIA

Security Title Insurance Bldg. Los Angeles, Calif. — 530 West 6th Street, Los Angeles, Calif.

Petroleum Bldg. Houston, Texas

PETRECO

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 92*)

WEST TEXAS
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Howard, Pecos and Winkler Counties and Lea County, N. Mex.

Below 25 gravity	.70
25 to 25.9 gravity	.74
26 to 26.9 gravity	.78
27 to 27.9 gravity	.82
28 to 28.9 gravity	.86
29 to 29.9 gravity	.90
30 to 30.9 gravity	.94
31 to 31.9 gravity	.98
32 to 32.9 gravity	1.02
33 to 33.9 gravity	1.06
34 to 34.9 gravity	1.10
35 to 35.9 gravity	1.14
36 and above	1.18

*Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties. Southern Crude Oil Purchasing Company posts only in Crane, Upton and Winkler Counties.

MARKHAM
The Texas Company
(Effective May 20, 1929)

All grades	$1.00

LULING

All grades	.90

NORTH AND CENTRAL TEXAS
(Effective May 21, 1929)
Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude
(Humble Oil and Refining Company)

Below 25	.85
25 to 25.9 gravity	.90
26 to 26.9 gravity	.95
27 to 27.9 gravity	1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 and above	1.85

SOUTH TEXAS

Mirando	.90
Salt Flat	1.25

GULF COAST
(Effective May 21, 1929)

Grade "A" all companies	1.30
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.18
26 to 26.9 gravity	1.21
27 to 27.9 gravity	1.24
28 to 28.9 gravity	1.27
29 to 29.9 gravity	1.30
30 to 30.9 gravity	1.33
31 to 31.9 gravity	1.36
32 to 32.9 gravity	1.39
33 to 33.9 gravity	1.42
34 to 34.9 gravity	1.45
35 to 35.9 gravity	1.48
36 to 36.9 gravity	1.51
37 to 37.9 gravity	1.54
38 to 38.9 gravity	1.57
39 to 39.9 gravity	1.60
40 and above	1.63

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

WYOMING-MONTANA
(Effective May 21, 1929)
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.65
Grass Creek	1.65
Rock Creek	1.40
Lost Soldier	1.05
Lance Creek	1.68
Mule Creek	1.20
Notches	.65
Big Muddy	1.43
Osage	1.38
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.48
Lander	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA
(Effective May 24)

Sunburst	$1.75
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

Artesia	1.08
Hogback	1.43

CANADA
(Effective May 21, 1929)

Oil Springs	2.27
Petrolia	2.20

LOUISIANA-ARKANSAS
(Effective May 22, 1929
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley*
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and The Texas Company.)

27 to 27.9 gravity	$1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 gravity and above	1.85

*Shreveport-Eldorado's postings stop at above 40 gravity.

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS
(All Companies)

Below 28 gravity	.90
28 to 28.9 gravity	.94
29 to 29.9 gravity	.98
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.06
32 gravity and above	1.10

SMACKOVER
(All Companies)

Below 24 gravity	.85
24 and above	1.00
Bellevue	1.30
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	1.00
Calion	.75

Deepest Producer in Lea County Completed

Artesia, New Mexico.—The Vacuum Oil Company and associates have completed the deepest oil producer in Lea County, New Mexico, flowing 140 barrels natural from broken lime at a total depth of 4710 feet. This producer was drilled on state fee land, in wildcat territory, being located in the southwest corner of the NW¼ Section 13-17s-34e. Because of its remote location from other producing areas in the county that are served by pipe lines extended from West Texas fields, negotiations are being made to secure a market outlet through crude purchasing companies operating in the Artesia and Maljamar fields. This deep well is flowing through two and one-half-inch tubing landed at 4496 feet. It logged oil formations at 4462-66 feet; with an increase at 4545 feet and best production at 4602-26 feet. The well began spraying oil at this horizon.

Slight production gains have been recorded by The Texas Company's wildcat test on the B. Lynch government permit, Section 34-20s-34e, since pumping operations have been continuous, and at last reports this well was making 1120 barrels daily from lime at 3722-31 feet. A 37,500-barrel tank has been erected to store the production until the Texas Pipe Line Company can complete work on laying a 38-mile, six-inch line from its Jal pump station and tank farm.

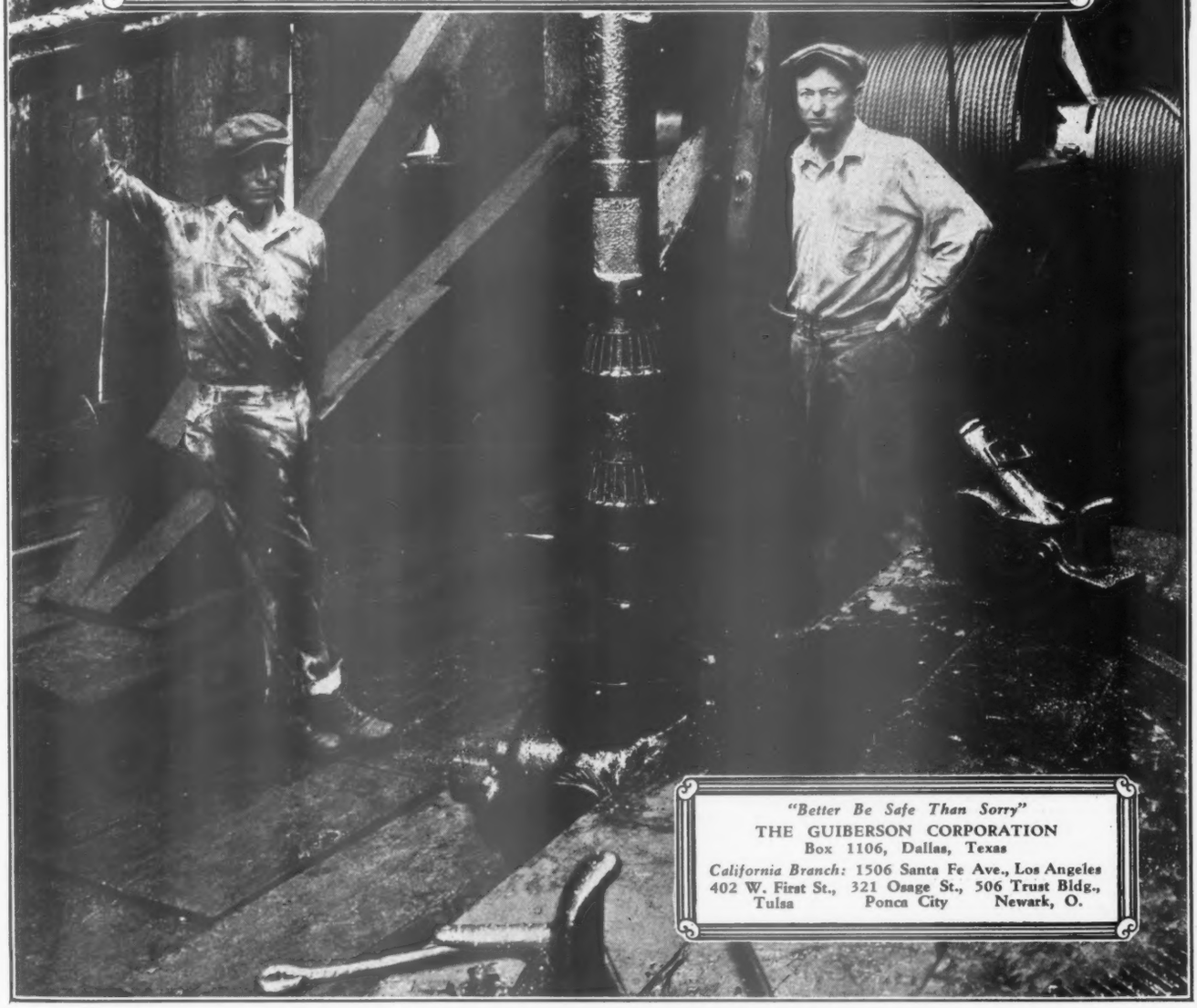
In Eastern Eddy County, Grayburg Oil Company et al's wildcat test on the Hugh Burch permit developed 1000 feet of oil in the hole from lime at 2990-3004 feet and at 3035-45 feet and is now awaiting a string of 6⅝-inch casing to set before deepening. This test is located 1980 feet from the south and 660 feet from the west lines of Section 19-17s-30e. It has a surface elevation of 3625 feet.

Howard County Oil Is Contracted by Refiner

Big Spring, Texas.—Cosden Oil Company has made new contract for the purchase of the daily production of the American Maracaibo Company in the Roberts and Settles pools, Howard County, at the gravity scale posted price for a period of one year, with privilege of renewing contract for a second year. This contract supplements one that has been in effect between the two concerns and involves a daily production of about 4000 barrels. The oil is gathered by the Cosden Pipe Line Company and delivered to the refining plants owned by the Cosden Oil Company near Big Spring.

"If *you want production, give us a Guiberson Swab and we will get it.*"

I. D. Smith, Driller, (left) and D. S. Neal, Tooldresser, (right) are shown here using a Guiberson Swab in the Carr City Field in the Seminole Area. Their statement above expresses their opinion of the merits of this excellent Guiberson product, whose flexible cup principle of construction has revolutionized the world's methods of swabbing. Ready proof of this statement is found in the fact that the Guiberson Swab is doing most of the world's swabbing today. Fully patented.



"Better Be Safe Than Sorry"
THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
402 W. First St., Tulsa — 321 Osage St., Ponca City — 506 Trust Bldg., Newark, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1928	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	675,450	108,300	523,330	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October	741,350	97,900	598,550	129,950	38,800	83,550	114,000	83,300	624,450	2,511,850	77,867,800
November	715,750	96,600	586,350	135,100	38,600	83,000	109,700	81,150	653,050	2,499,300	74,978,300
December	710,600	97,200	603,700	135,050	37,300	81,350	113,450	74,600	697,850	2,551,100	79,084,400
1929											
January	722,550	97,150	632,500	136,750	36,650	78,600	111,950	73,200	747,250	2,635,600	81,703,600
February	714,800	95,950	643,350	142,300	35,700	74,600	108,550	71,750	797,800	2,684,800	75,204,400
March	666,500	95,500	662,500	147,750	35,800	74,250	108,850	70,400	786,000	2,647,400	82,068,350
April	665,600	106,400	650,100	154,550	35,550	72,900	110,850	69,400	781,350	2,646,700	79,402,100
May	679,650	115,400	651,100	150,350	35,350	71,500	114,150	72,850	749,250	2,639,600	81,827,600
June 1	686,850	118,150	676,200	143,600	35,150	71,450	115,750	74,300	790,200	2,711,650	18,981,550
June 8	683,050	119,100	688,700	146,700	34,900	70,900	116,150	69,450	795,500	2,724,450	19,069,050
June 15	674,700	120,800	688,050	147,300	36,750	69,950	116,500	73,900	815,300	2,743,250	19,202,750
June 22	679,650	121,400	687,150	147,250	36,000	69,800	116,900	70,850	835,500	2,764,500	19,351,500
Increase	4,950	600	.....	.....	.....	.....	400	.....	20,200	21,250	148,750
Decrease	.....	.....	900	50	750	150	.....	3,050	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	June 22	June 15
Carson County	7,500	7,300
Gray County	58,400	50,750
Hutchinson County	26,000	26,100
Wheeler County	750	900
Others	1,200	1,400
Total	93,850	86,450

NORTH TEXAS

Archer County	17,200	17,150
Burkburnett	8,900	9,050
Electra	12,200	12,100
Iowa Park-KMA	5,000	5,050
Montague and Cooke Cos.	12,750	12,600
Wilbarger	26,400	26,750
Others	700	600
Total	83,150	83,300

WEST CENTRAL TEXAS

Brown County	7,600	7,550
Callahan County	4,150	3,950
Coleman County	3,700	3,800
Eastland-Desdemona	6,450	6,500
Jack County	2,700	2,650
Palo Pinto County	400	400
Shackelford County	11,650	11,750
Stephens County	6,200	6,300
Throckmorton County	600	600
Young County	6,800	6,900
Others	600	600
Total	50,850	51,000

WEST TEXAS

Crane-Upton Counties	46,700	47,000
Crockett County	2,000	2,100
Howard County	44,000	43,750
Jones County	3,450	3,750
Mitchell-Scurry Counties	2,700	2,700
Pecos County	95,500	104,900
Reagan County	18,400	18,100
Winkler County	144,300	143,700
Others	1,750	1,800
Total	358,800	367,800

EAST CENTRAL TEXAS

Boggy Creek	2,900	2,800
Corsicana-Powell	7,800	7,950
Currie	400	400
Mexia	5,700	5,850
Nigger Creek	500	500
Richland	400	400
Wortham	1,000	1,100
Total	18,700	19,000

SOUTHWEST TEXAS

Dale	450	500
Laredo District	11,000	11,100
Luling	11,800	11,900
Lytton Springs	900	900
Somerset	1,750	1,850
Salt Flat	52,000	50,200
Others	3,900	4,050
Total	81,800	80,500
T'tl Tex. (Outside Gulf Coast)	687,150	688,050

TEXAS GULF COAST

Barbers Hill	8,750	8,300
Batson	1,500	1,400
Big Creek	3,050	2,050
Blue Ridge	4,000	3,550
Boling	1,600	1,700
Damoun Mound	700	600
Goose Creek	5,800	5,900
Hull	8,950	9,500
Humble	5,650	5,900
Orange County	2,900	2,900
Pierce Junction	18,700	18,800
Raccoon Bend	6,100	5,950
Saratoga	850	900
Sour Lake	2,700	2,750
South Liberty	5,400	5,500
Spindle Top	26,400	25,750
Sugar Land	11,100	11,150
West Columbia	6,300	6,350
Washington County	2,600	2,700
Others	4,200	3,800
Total	127,300	125,450
Texas Total	814,450	813,500

OKLAHOMA

Braman	3,700	3,800
Logan County	16,650	15,600
Blackwell	3,750	3,850
Hubbard	1,850	1,850
Thomas	900	900
Tonkawa	9,900	10,050
Garber	5,750	5,800
Burbank	19,800	19,850
Osage (outside Burbank)	26,350	25,600
Cushing	18,750	19,200
Yale Jennings	7,000	6,800
Davenport	1,450	1,450
Bristow Slick	18,850	19,300
North Okmulgee	13,000	13,000
Lyons Deaner	7,700	7,700
Cromwell	8,100	8,100
Papoose	3,250	3,300
Wewoka	4,800	4,800
Seminole	33,950	34,800
Bowlegs	35,100	35,000
Searight	11,800	12,050
Little River	78,500	76,650
Earlsboro	63,000	59,900
Duncan District	7,200	6,750
Graham	4,250	4,200
Fox	1,400	1,400
Healdton	12,800	12,800
Hewitt	8,100	8,200
Scholem Alechem	12,650	12,900
Pearson	1,350	1,500
St. Louis	88,600	87,200
Allen	23,450	23,050
Maud	26,650	26,800
Mission	34,900	38,050
Oklahoma City	3,200	2,500
Others	61,200	60,000
Total	679,650	674,700

CALIFORNIA

Santa Fe Springs	246,500	222,500
Long Beach	174,000	175,000
Huntington Beach	40,500	42,500
Torrance	13,000	13,500
Dominguez	10,000	10,000
Rosecrans	5,300	5,300
Inglewood	22,300	22,500
Midway-Sunset	64,000	64,000
Ventura Avenue	60,000	62,500
Seal Beach	47,000	44,000
Elwood-Goleta	27,000	26,600
Kettleman Hills	3,400	3,400
Others	122,500	123,500
Total	835,500	815,300

KANSAS

Greenwood County	21,500	21,050
Florence-Covert	950	950
Peabody-Ebling	2,800	2,700
Eldorado-Towanda	12,950	12,950
Augusta-Fox Bush	3,100	2,950
Rainbow Bend	1,100	1,050
Russell	3,350	3,350
Churchill	6,350	6,500
Oxford	4,550	4,450
Sedgwick	34,200	35,050
Others	30,500	29,800
Total	121,400	120,800

NORTH LOUISIANA

	June 22	June 15
Homer	3,950	3,950
Haynesville	5,200	5,200
Caddo Light	9,100	9,850
Caddo Heavy	3,400	3,100
DeSoto-Red River	3,800	3,900
Elm Grove	600	650
Bellevue	600	600
Cotton Valley	2,700	2,800
Urania	5,950	6,000
Pleasant Hill	450	450
Others	250	250
Totals North Louisiana	36,000	36,750

LOUISIANA GULF COAST

Bayou Boullion	200	400
East Hackberry	2,100	2,200
Hackberry	2,400	2,500
Edgerly	750	700
Evangeline	2,950	3,350
Lockport	3,950	4,100
Sorrento	200	250
Sulphur Dome	2,000	2,200
Sweet Lake	300	500
Vinton	4,500	5,000
Others	600	650
Total Louisiana Gulf Coast	19,950	21,850
Louisiana Total	55,950	58,600

ARKANSAS

El Dorado	4,600	4,600
Champagnolle	7,250	7,350
Smackover Light	6,100	6,050
Smackover Heavy	48,550	48,550
Stephens	1,000	1,000
Nevada	950	950
Lisbon	1,250	1,350
Others	100	100
Total	69,800	69,950

MOUNTAIN STATES

WYOMING

Salt Creek	27,250	31,050
Grass Creek	2,250	2,350
Elk Basin	800	750
Big Muddy	2,250	2,250
Lost Soldier	4,050	3,300
Rock River	2,250	2,250
Lance Creek	250	250
Oregon Basin	4,300	4,100
La Barge	2,100	1,750
Others	4,550	4,000
Total	50,050	52,050

MONTANA

Cat Creek	1,450	1,400
Sunburst	6,850	6,850
Pondera	3,150	3,150
Others	100	100
Total	11,550	11,500

COLORADO

Moffats (Craig)	1,300	1,650
Fort Collins	2,450	2,500
Florence	900	950
Others	2,350	2,600
Total	7,000	7,700

NEW MEXICO

Table Mesa	650	...
Artesia	900	900
Hogback	200	200
Rattlesnake	100	1,150
Others	400	400
Totals	2,250	2,650
Totals Mountain States	70,850	73,900

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	116,900	116,500

PRODUCTION SUMMARY

East of Rockies	1,858,150	1,854,050
Total U. S.	2,764,500	2,743,250

PARKERSBURG

Has served the oil fields of the world for 32 years

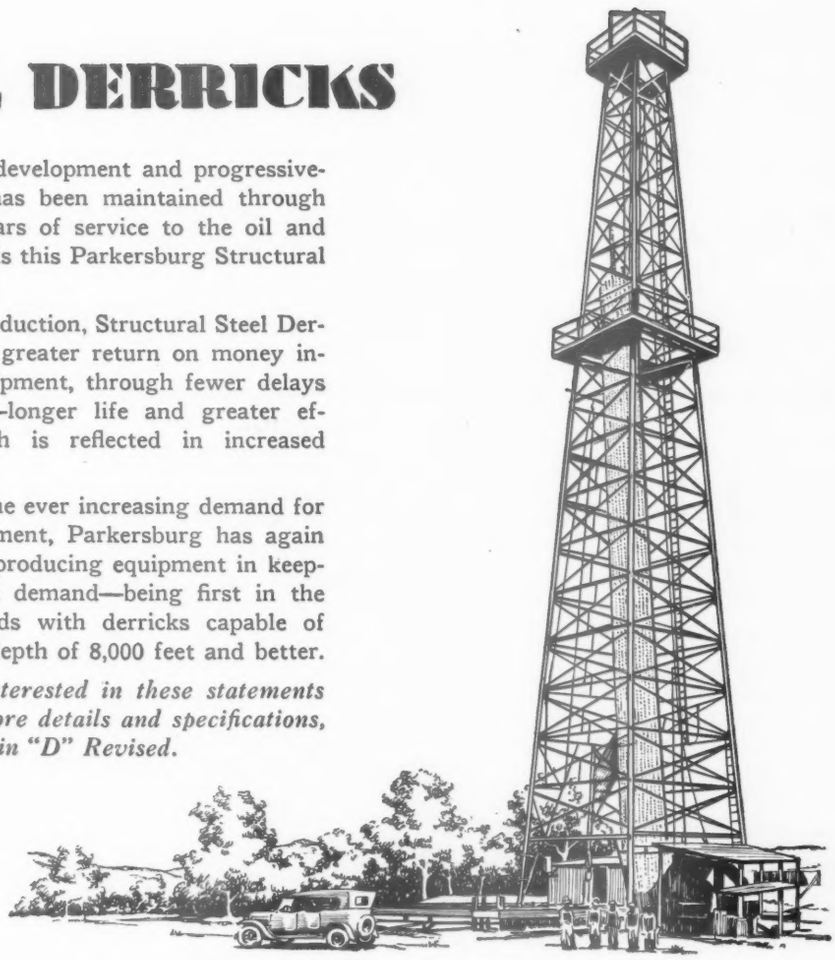
STEEL DERRICKS

Typical of a development and progressiveness, which has been maintained through thirty-two years of service to the oil and gas industry, is this Parkersburg Structural Steel Derrick.

In oil field production, Structural Steel Derricks mean a greater return on money invested in equipment, through fewer delays in operation—longer life and greater efficiency which is reflected in increased profits.

Today with the ever increasing demand for heavier equipment, Parkersburg has again pioneered by producing equipment in keeping with that demand—being first in the deep test fields with derricks capable of drilling to a depth of 8,000 feet and better.

If you are interested in these statements and desire more details and specifications, ask for Bulletin "D" Revised.



THE PARKERSBURG RIG & REEL COMPANY

EXECUTIVE OFFICES & MAIN PLANT

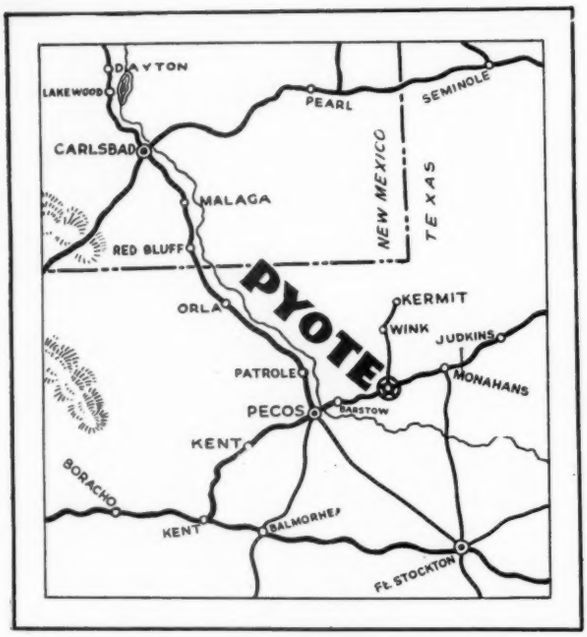
PARKERSBURG, WEST, VA.

PARKERSBURG PRODUCTS

Steel Derricks and Steel Crown Blocks ☐	Rig Irons (A.P.I. Standard) ☐
Chain Driven Sand Reels and Bailing Reels ☐	Portable Drilling Machines (Wood and All-Steel) ☐
Steel Wheels ☐	Bolted Steel Tanks ☐
All-Steel Standard Rigs ☐	Miscellaneous Drilling Equipment ☐

Check the equipment in which you are interested, tear out and return this coupon, with your name and address, to us, and we will send you complete information on the items checked.

•PYOTE• *Winkler County Area*



The Discovery well of the Hendrick pool of Winkler County, West Texas, was completed Nov. 8, 1926, for an initial production of 400 bbls. daily from a total depth of 3049 ft., gravity of oil being 28-30 deg. Top of the lime was hit at 2604 ft.

There are now 576 producing wells in the Hendrick field, with a daily production of around 148,000 bbls., with production partially shut in under supervision of the Oil and Gas Division of the State Railroad Commission.

Production in this field has been held down to a small percentage of the potential output in the effort to conserve the oil, with the elimination as far as possible of both physical and economic waste. Combined initial production of the 576 wells was 3,014,805 barrels, an average initial per well of 5327 barrels. In 1927 Winkler County produced 3,046,000 barrels of oil, and the 1928 total was 57,502,000 barrels. Based on one-hour open flow tests made in carrying out the proration program, the Hendrick field has been credited with potential daily production of 2,700,000 bbls.

MR. H. D. STRONG
Local Store Manager
Pyote, Texas

WILLIAM POWELL COMPANY

Valves for the Oil Industry

J. P. RATIGAN
"Sure-Grip" Line of Pumping Equipment

JOS. REID GAS ENGINE COMPANY
Two and Four Cycle Gas Engines, Pumping Powers, Refinery Equipment

JOHN A. ROEBLING'S SONS COMPANY
Wire Line and Welding Wire

ROSSENDALE-REDDAWAY COMPANY
"Camel Hair" and Stitched Canvas Belting

WALWORTH COMPANY
Fittings and Valves for all Branches of the Oil Industry

WHITLOCK CORDAGE COMPANY
Manila Cordage, including Drilling Cables, Bull Ropes, Cat Lines, Etc.

AXELSON MACHINE COMPANY
Sucker Rods, Pull Rods, Working Barrels, etc.

BEAUMONT IRON WORKS COMPANY
Dreadnaught Rotary Drilling and Pumping Equipment

FRICK-REID SERVICE RUBBER BELTING
Our Own Specifications

DONOVAN BOILER WORKS
Oil Country Boilers and Tanks

JONES & LAUGHLIN STEEL CORPORATION
Tubular Goods, Seamless and Lapwelded

NATIONAL TRANSIT PUMP & MACHINE COMPANY
Pumps and Pipe Line Equipment

FRICK-REID
SUPPLY CORPORATION

Covers the field with well managed stores from the Rocky Mountains to the Atlantic Coast.

Pittsburgh - - - - - - - Tulsa

PERSONAL MENTION-MEN YOU KNOW

John W. Tambert, who for nearly five years has been in charge of the cost and manufacturing departments of the Perfex Corporation, manufacturers of heavy duty radiators, has been promoted to the post of secretary and treasurer, according to D. T. MacLeod, president. Tambert succeeds C. G. Phelps, who recently resigned.

R. E. Hardwick, who has had about 15 years continuous service with the Gulf Companies, and for the past several years has been in charge of the legal department of the Venezuela-Gulf Oil Company at Caracas, Venezuela, has resigned to resume practicing law, with headquarters in the Electric Building, Fort Worth. Prior to the acceptance of the South American post, Hardwick was in charge of the legal department of the Fort Worth district offices of the Gulf Production Company.

W. L. Stewart, president of the Union Oil Company of California, has announced several important changes in the executive personnel of the company. E. W. Clarke, executive vice-president of the company, has resigned to devote his time to private affairs. Clarke formerly was president of the American Petroleum Institute. L. P. St. Clair, formerly vice-president in charge of field operations, has succeeded to the executive vice-presidency. Paul Boggs, formerly vice-president in charge of sales, has been promoted to vice-president in charge of field operations, succeeding St. Clair. R. D. Matthews, vice-president in charge of production, will become vice-president in charge of sales. W. L. Stewart, Jr., has been appointed manager of production.

R. C. Edwards, former vice-president of the National Oil Scouts Association, and scout in North Louisiana for the Gulf Refining Company, last week underwent a operation for the removal of his tonsils. He has completely recovered.

J. M. McNeal, direct representative in Europe of the Landis Machine Company, Waynesboro, Pennsylvania, manufacturers of threading machinery, sailed June 20 for England, after spending a month at the home office in Waynesboro.

Boyd McKinley has just rejoined the sales staff of the MacClatchie Manufacturing Company, Compton, California. He is assigned to Santa Barbara, and will also be associated with L. O. Myers in supervising the under-reaming in the Bakersfield district. McKinley was recently a representative of the Eason and Therolf Tool Company.

R. J. KEOWN

recently elected vice-president and treasurer of the Union Oil Company of California. Mr. Keown has been treasurer of the company since 1918.

Frank T. Pickrell, former vice-president and active manager of the Texon Oil & Land Company and its subsidiaries, which were acquired May 15 by Marland Oil Company, returned to his home in Fort Worth recently and announced that he would continue to operate in the producing branch of the industry, but as an individual operator for the time being.

Dave Harris, formerly district superintendent for the Humble Oil & Refining Company at Salt Flat, has been transferred and made drilling and production superintendent for the Gulf Coast district, with headquarters in Houston.

Earl Chandler, formerly at Casper, for Axelson Machine Company, is assistant district manager at Tulsa.

Dr. W. Van Holar Pellekaan of St. Louis, Missouri, vice-president of the Shell Petroleum Company, arrived in Shreveport last Thursday evening in a tri-motored Fokker plane, "The Golden Shell." He continued his flight to Houston, Texas, on Saturday. Mrs. G. M. Piggott and her small son accompanied the official on the hop here from St. Louis. C. C. Clark, Shreveport representative of the company, joined Dr. Pellekaan on the flight from here to Houston. The official is making an inspection of the company's properties in the Southwest.

J. R. Williams, chief engineer of the Skelly Oil Company, Tulsa, and chairman of the Mid-Continent section of the American Petroleum Institute's division of development and production engineering, is attending the meeting of national executives at Los Angeles.

W. S. Evans and **F. E. Bernsen,** president and vice-president, respectively, of Lucey Products Corporation, are on an extended trip to Europe. They will visit London and Paris and go as far as the Roumanian oil fields.

H. J. Lockhart, vice-president and general manager of the Parkersburg Rig & Reel Company, Parkersburg, West Virginia, visited the Fort Worth district sales office of the company early this week.

N. Watanabe, representative of the Ogura Oil Company, Ltd., of Tokio, Japan, has returned to the home office of the company after a study of California methods.

O. G. Keil, field engineer for the Link-Belt Company, has been transferred from the Los Angeles to Dallas district offices.

Oliver Ames, senior member of the board of directors of the General Electric Company, died at his home in North Easton, Massachusetts, on June 18. Ames was 65 years old at the time of his death, and had been a member of the board since 1893, succeeding his father when the latter died.

C. L. McCorkindale, handling advertising for National Tool & Metals, Inc., Torrance, California, was married June 6, to Miss Lorna McLean.

AN OUTSTANDING RECORD OF OILFIELD SERVICE

Type P B Power with 20-foot wheel and 24-inch eccentrics

Reid Pumping Powers, found in every producing field where the multiple pumping of wells has proven successful, have established a reputation for service unexcelled by any other oilfield unit.

In Pennsylvania where the wells are shallow, or in Texas where the wells are deep, Reid Powers do their intended work, day after day and year after year, requiring very little attention from the operator and practically no upkeep expense.

There is a Reid Power of suitable capacity for your lease whether the power requirement is 15 H.P. or 100 H.P.

Reid Band Wheel Powers can be equipped with bronze bearings or Timken Tapered Roller Bearings.

Write any branch or distributor for descriptive bulletins on Reid Pumping Powers.

JOSEPH REID GAS ENGINE CO.

OIL CITY, PENNSYLVANIA, U. S. A.

BRANCHES—Marietta, Newark, and Logan, Ohio; Charleston, W. Va.; S. R. Shoup, 724 Board of Trade Building, Los Angeles, California.

EXPORT SALES REPRESENTATIVE—Oil Field Equipment Co., Inc., 30 Church Street, New York City.

DISTRIBUTORS—Frick-Reid Supply Corp., Pittsburgh, Pa., and Tulsa, Oklahoma, Distributors for Bradford and Pittsbugh, Pa., Kentucky, Oklahoma, Kansas, Texas, Arkansas, Louisiana, and Wyoming; R. B. Moore, Bolivar, N. Y.; distributed in California by The Republic Supply Co. of California, office address 2122 East Seventh St., Los Angeles, Cal.

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Gray County Output Doubled in Past Five Weeks

AMARILLO, Texas.—Another advance in production was registered during the past week in the Gray County section of the Texas Panhandle, placing the output of the county at a new peak of 55,500 barrels daily, although only a small volume of new production was added during the seven-day period.

Gray County's output has been doubled within the past five weeks through the completion of less than 30 wells, thus placing it on a par with Caldwell County for third place honors for the largest oil producing counties in the state, with Winkler and Pecos Counties leading in the order named.

This rapid climb in production from a comparatively few completions has had a stimulating effect on field work in Gray County, and at the close of last week there were 82 active tests under way, using rotary or cable tools, and 44 locations, derricks and rigs. Completion of this new field work is expected to boost the output of Gray County close to the 100,000-barrel mark late in July, or in August.

New operations started in Gray County since the rapid rise in production will not begin appearing on completion reports for several weeks, while several outpost tests drilling between the Bowers-Jackson and Lefors pools will result in a number of new locations being staked should flush production be obtained. Phillips Petroleum Company's Jackson-Cox 1, located in the northeast corner of Section 58, Block B-2, H. & G. N. Survey, is one of the key locations, and formations encountered above the expected pay level have been checking normal for a good producer. This test cemented casing at 2721 feet, standardized to drill in late last week, and should be completed during the week. The Lefors section of the flush area, centering around Continental Oil Company (Marland) Finley-Brown lease, where the present boom in drilling and production received its greatest momentum, appears favorable for a north trend. Operators Oil Company's Cook-Faulkner 2 developed a flow of 105 million cubic feet of gas at 2765 feet, with a surface elevation of 2932 feet, and a spray of oil appeared as the volume of gas decreased while trying to drill in. This well is one location north of the above company's Cook-Faulkner 1, which was completed as a 3800-barrel well May 8 at 2787-90 feet and late last week was flowing within 50 per cent. of its initial.

Drilling Boom

A few unusually prolific producers have brought the current drilling boom to the Gray County area, and such wells represent a small percentage of completions made in the county to date. The Texas Company's J. B. Bowers 1, located in the southwest corner of the east one-half of Section 89, has set the pace on crude recovery per well, having produced more than 1,500,000 barrels since its completion in January, 1928, with production holding at 1500 barrels daily. Gulf Production Company's Bowers 3, a west offset to this well, is credited with having produced about one million barrels since its completion one week after above well. It was flowing about 950 barrels when given a light shot recently. This shot caused the hole to begin caving, and production has dropped to a small volume.

The largest completion made in Gray County during the past week was from The Shamrock Company and McIlroy Interests' Clayton-Chapman 3, located in the northwest corner of the east 277-acres in Section 50, Block 25, H.&G.N. Survey. This well swabbed and flowed 1000 barrels initial from granite wash at 2834-46 feet, with a surface elevation of 2848 feet, and was somewhat of a surprise, since it is partially surrounded by failures.

Phillips Petroleum Company's William Jackson-Joe Dan 2-A, has been started as a twin offset to an abandoned producer in the northwest corner of the north one-half of the NE¼ Section 88, to try for a new producer. This test is a south offset to the record producer held by The Texas Company on the Bowers lease.

Sound Market Structure

Further evidence of a sound crude market structure in the Texas Panhandle district is offered by the withdrawal of 107,920 barrels of oil from storage during May, or at average rate of 3481 barrels daily, leaving 15,957,480 barrels of oil on hand at the close of the month, with approximately 8,441,000 barrels of idle steel tankage in the district. The bulk of this surplus tankage is available for use should Gray County's production continue to climb and exceed current pipe line, tank car and local refinery demand. Panhandle stocks at the close of May, 1928, or 12 months ago, amounted to 17,780,735 barrels.

During May, the 1580 producing wells in the Texas Panhandle district are credited with having produced approximately 2,096,000 barrels of crude, while during the same period the four major trunk lines serving the district operated at less than one-half of their maximum capacity in transporting 1,507,000 barrels. Humble Pipe Line Company's 10-inch carrier averaged 17,500 barrels daily, or about 50 per cent of its capacity during May, while the jointly owned 10-inch trunk line system of Gulf Pipe Line Company and Magnolia Pipe Line Company maintained a daily average of 7750 barrels, or less than one-fourth of the rated capacity. The latter two carriers are badly congested with West Texas crude movement from their Ranger district terminals to the Gulf Coast, and for that reason elected to back up Panhandle crude into storage, while a similar situation partially explains the drop in shipments by Humble Pipe Line Company. Prairie Pipe Line Company's eight-inch carrier, extending to Ringling, Oklahoma, averaged 14,000 barrels daily, or nearly at capacity, while the eight-inch trunk line system of The Texas Pipe Line Company handled an average of 9400 barrels daily during May, with a large percentage of its Panhandle runs being diverted to Amarillo, where The Texas Company is operating a large skimming plant.

Tank car shipments of crude are mostly confined to that obtained in Gray County, with the Bell Oil & Gas Company and the Champlin Refining Company doing the bulk of the shipping. The latter two concerns are credited with having loaded 268 cars of crude for consignment to independent refineries in Kansas.

More than 50 per cent. of the crude stocks in the Texas Panhandle are controlled by Magnolia Petroleum Company and Phillips Petroleum Company, with the former holding 4,200,300 barrels. Phillips Petroleum Company's stocks are reported at 3,947,350 barrels, thus giving the company an immense crude reserve for its refinery near Borger, Texas. Marland Production Company (Continental Oil Company) has made the heaviest inroads on crude stocks, having withdrawn 994,155

barrels within the past 12 months, with a total of 138,595 barrels on hand at the close of May. This company has a three-year crude contract with Humble Oil & Refining Company that expires in December, 1929, and withdrawal from storage has been necessary to meet daily crude commitments when production failed to equal the amount specified in the contract.

Crude stocks in the Texas Panhandle district at the close of May, 1929, are listed below by companies:

Company—	Barrels
Magnolia Petroleum Company..	4,200,300
Phillips Petroleum Company...	3,947,350
Prairie Oil & Gas Company....	2,666,375
Gulf Production Company.....	2,519,650
Skelly Oil Company	970,650
Humble Oil & Refining Company	655,900
The Texas Company	217,210
J. J. Perkins et al	157,960
Continental Oil Company (Marland)	138,595
Empire Gas & Fuel Company..	106,320
Mid-West Exploration Company	81,860
Plains Pipe Line Company.....	64,550
Pampa Refining Company.....	51,900
Sunny-Jim Oil Company.....	50,500
Shell Petroleum Corporation...	32,950
American Refining Properties..	30,100
McMillan Petroleum Products Company	17,300
Champlin Refining Company...	16,395
Bell Oil & Gas Company	15,010
Pantex Pipe Line Company ...	10,010
Dixon Creek Oil Company et al	6,595
Totals 15,957,480	
Totals at close of April, 1929 16,065,400	
Total decrease during May.	107,920

Cities Service Statement Reflects Earnings Gain

New York.—Cities Service Company net earnings for the year ended May 31, 1929, were the largest for any 12 months in the history of the company, amounting to $36,423,178.66. Net earnings for May were $3,414,322.53, also a new high record for any month.

Cities Service Company net earnings for the 12 months ended May 31, 1929, were 6.58 times interest and discount on its debentures. Net stocks and reserves amounted to $30,889,534, or 4.56 times preferred stock dividends. This compares with $29,344,895 or 4.31 times for the corresponding period a year ago. Net to common stock and reserve rose to $24,123,972.16 or $1.12 per share on the average number of shares outstanding, an increase of $1,579,078.91 over the corresponding period a year ego.

Coincident with the publication of its earning statement, Cities Service Company announced dividends for the month, of two and one-half cents in cash and one-half of one per cent. in common stock on the new no par common stock. Regular monthly dividends of fifty cents on the preferred and preference BB stocks were announced, all payable August 1, to stockholders of record July 15.

Expect 30,000 Barrel Increase For Yates Proration

FORT WORTH.—An official order authorizing an increase in allowable production in Yates field from 100,000 to 130,000 barrels daily, beginning July 1, is expected to be issued before the close of the current week by the Texas Railroad Commission. Recommendations to this effect were made by Yates field operators after a meeting held on June 3, and a formal hearing by the commission here Tuesday morning, with Chairman Clarence E. Gilmore presiding, brought forth expert testimony that there will be no waste of oil or gas in the field by increasing production 30,000 barrels daily.

No opposition was offered at the hearing on the proposed increased allowance, but several of the major producing units in the field qualified their affirmative vote with provisions that the production be limited to 130,000 barrels for the balance of the year. The operators as a whole expressed themselves as being well satisfied with proration enforcement in Yates field, which has been under the supervision of the commission for about one year, with a six months extension already approved.

The following testified at the meeting: E. G. Allen, Shell Petroleum Corporation; F. J. Adams, Gulf Production Company; W. A. Moncrief, chairman of the advisory committee; Warner Clark, The California Company, and Hines Baker, Humble Oil & Refining Company.

All producers in the Yates field are now being given a new one-hour open flow gauge by Umpire Ray Richmond and his staff, and a revised potential production will be available at the close of June, with indications that drainage has had comparatively little effect on individual well potentials since a complete gauge was taken about six months ago.

R. D. Parker, chief supervisor of the oil and gas division of the commission, who also attended the hearing, announced that definite progress has been made in locating the group of wells that are responsible for seepage oil on the southeast side of the field. Four or more wells are known to be contributing to this source of trouble, and the commission is forcing the owners to recement the casing, or, if necessary, to plug the holes. About 8000 barrels of oil is now being recovered daily from pits, shallow wells and trenches along the banks of the Pecos River.

Get Seepage Oil

Both Continental Oil Company (Marland Production Company) and the Grayburg Oil Company are recovering more seepage oil daily from their Yates field leases than that allowed daily under proration rules from wells completed in the regular pay sand on the properties. The former concern's I. G. Yates 320-acre lease, bordering on the west bank of the Pecos River and occupying the east one-half of section 60, is less than 50 per cent. productive in the regular pay horizon, but is the principal point of accumulation for the migratory oil that is escaping from wells drilled further to the west of the river and at a higher point on the structure.

Continental Oil Company is averaging about 6300 barrels of production daily from its seepage oil, which is trapped in shallow pits and trenches, or pumped from more than a score of wells drilled to an average depth of 32 feet. This company began producing shallow oil February 22, 1929, and has registered a steady gain in production each month, with a total recovery of 211,321 barrels up to and including June 15, having recovered 68,475 barrels during the first 15 days in June, or an average of 4,566 barrels daily. Since this production does not cut into allowance under proration rules from wells drilled to the regular oil horizon, about 20 more shallow tests are to be drilled, and possibly more pits and trenches dug.

Grayburg Oil Company and the former owners of the Pecos River bed lease have been recovering seepage oil from the west bank of the Pecos River since October 30, 1928, and production was being increased each month until owners of leases to the west began drilling shallow pumpers and sinking pits and trenches. Grayburg Oil Company et al are credited with having recovered 162,938 barrels of seepage oil up to the close of May, with a peak production of 48,085 barrels during April, while production dropped to 33,508 barrels in May.

Encouraged by the success met with by the above operators, the Mid-Kansas Oil & Gas Company and Trancontinental Oil Company, joint operators, became interested in seepage oil, and brought in their first shallow pumper March 9, 1929, with a steady increase in output resulting on their Yates A, B and C leases. The latter interests are credited with having recovered 18,672 barrels during May, making a total of 27,618 barrels up to the close of May. A number of additional shallow wells are to be drilled on the latter leases. The total recovery of seepage oil up to the close of May is placed at 333,402 barrels.

The table below gives comparative production figures on seepage oil in the Yates field since its appearance on October 30, 1928, to the close of May, with the last two months production separated:

	Previous Prod.	April Prod.	May Prod.	Total Prod.
Grayburg Oil Co. ...	81,345	48,085	33,508	162,938
Continental Oil Co. (Marland)	28,206	30,750	83,890	142,846
Mid-Kansas-Transcontinental . ..	2,855	6,091	18,672	27,618
Totals . .	112,406	84,926	136,070	333,402

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Relief From O'Connell Zone Flood Expected in Six Weeks

LOS ANGELES.—Responding to the completion of several large wells and the release of a large part of the oil shut in under recent curtailment orders, Santa Fe Springs reached a new peak of 250,000 barrels during the past week and was placed in a position to go even higher by the end of June. The ease with which the field attained such a high figure indicated that the climb might not be checked for a few weeks, but an analysis of field operations showed that relief from the O'Connell zone flood is due within six weeks, unless some unexpected turn develops.

The O'Connell zone is now producing more oil from 46 wells than the field was producing two months ago. The situation is probably not serious when viewed from the future angle. This sand has prevented the field from dropping to a production of less than 100,000 barrels, and it is sure to show a decline during the summer months. Regarded as potentially good for around 100,000 barrels, the zone has developed into one of the best formations yet found in the field. With a thickness of almost 600 feet (including the upper Clarke sand, which is now ordinarily produced with the O'Connell zone) the formation is setting an almost unprecedented pace.

Decline from wells completed a few weeks ago has been so slow that only a few new wells are required to create a new peak. The sand has an ideal gas-oil ratio, with the gas showing a tendency to increase in some of the best producers. This condition is in sharp contrast to the Buckbee zone, which was a great gas producer for several weeks.

One major operator released much of its shut in oil during the week to compete with wells producing wide open on offsetting leases. By increasing the size of the beans, production was almost doubled in a few wells. Other producers responded satisfactorily to the larger flow beans. In a few wells, the increase was much larger than expected. Although the increase gives the field a more dangerous appearance, it will certainly be reflected in a more rapid decline at a future date.

Thirty Completions Due

Past experience in the field, and every other critical field in California, has revealed that the outlook appeared darkest just before a downward trend started. There has been no positive way of determining just when such a break should come, and the Santa Fe Springs situation is no exception. About 30 wells are due for completion in the O'Connell zone within the next three weeks. Many of these wells will be very large producers, while others certainly will be small. The natural decline of the older wells will soon be felt, just as it was felt in the upper zones. The momentum of the upward swing seems to depend upon the average production of the new wells. More than 30 wells are drilling between the Buckbee and O'Connell zones, the most of which should be completed within two months.

Average initial production of the O'Connell zone wells continues unusually high, the 10 wells completed during the past week having had an average of almost 5000 barrels. Several edge wells will be finished during the next two weeks and these are expected to bring the average down slightly.

Although the development of the O'Connell zone precludes the possibility of intensive drilling to the lower Clarke sand, interest in the latter is growing as additional drilling discloses a very satisfactory sand condition. The first half dozen wells to reach the lower Clarke sand cemented casing too high. This fact has been proved by the extremely high pressure encountered in edge wells fully 300 feet below the final shutoff. Field engineers have made a careful study of cores taken from the lower Clarke sand and believe that the zone will prove to be a major producer inside the field. At least five wells have cemented casing on top of the sand, only to find the real body of the formation at a greater depth. These developments have been in wells which were entirely outside the producing limits of the Buckbee zone, giving the inside leases a much better appearance.

Oscar Howard's Hathaway 6 has developed into one of the most interesting and important wells in the field. Drilling was stopped at 8006 feet, after the pressure in the lower Clarke zone became so great that it was difficult to keep mud in the hole. The sand was originally found at 7675 feet, and a string of 6⅝-inch casing cemented at 7667 feet. This was one of the longest strings of casing ever run. The first 200 feet below the shoe of the casing failed to show much life and the well was continued in search of a better testing place. Although the lower Clarke sand was in evidence all the way down, it was not until a depth of 7900 feet was reached that the zone showed much life. During a part of the last hundred feet, it was necessary to change drilling mud at short intervals to prevent a blowout.

A new world's record was established when a string of 4¾-inch casing was successfully landed at 7902 feet. This casing was run to shut off the part of the lower Clarke sand not wanted and that which had caused considerable trouble in other wells. The new string of casing was run inside the 6⅝-inch without a hitch and is the longest string of any size ever run. The outcome of the production test under way is regarded as a key to development in this part of the field.

May Be Miocene

The "kick" demonstrated in the bottom of the lower Clarke zone is believed to come from the Miocene, which is responsible for the deep production at Long Beach. Cores taken in the top of the sand show gas and oil, but the moment the real sand is tapped, the pressure builds up rapidly. Improved drilling methods will bring the new sand within reach of the operators, and the next flood of oil probably will come from the lower Clarke zone. It is apparently as large in lateral extent as the Meyer zone and may be more than 500 feet thick. If this sand proves to be

the true Miocene, Santa Fe Springs may be producing from 9000 feet, or even 10,000 feet within two years. The zone is found around 7500 feet in the center of the field and will be at least 400 feet thick, if edge wells are a criterion.

Bandini Oil Company's Off 10 was the best completion of the week, coming in with an initial production of 10,000 barrels from 6850 feet. The oil was 35.4 gravity and showed a cut of only one-tenth of one per cent. The well was drilled about 100 feet into the upper Clarke sand and has a low gas-oil ratio.

The Texas Company, already the largest producer in the deep zones, continued its success in the O'Connell zone with the completion of two wells. Both showed much higher cuts than earlier completions, however, and failed to clean up as expected. Wickman 4 came in with an initial production of 8550 barrels from the top of the O'Connell at 6257 feet. The oil showed a cut of 18 per cent, indicating that the cementing job was faulty. Steinly 5 was completed as a 2100-barrel producer at 6397 feet, the oil showing a cut of nine per cent. Standlee 3, one of the few Nordstrum zone completions during the past two months, made only a fair showing, having flowed about 600 barrels of clean oil. The well was drilled to 5027 feet and included only the top of the sand.

New Producers Added

General Petroluem Corporation, most active operator in the field, regained its stride, completing three good wells. Santa Fe Springs 221 was completed with an initial production of 6200 barrels from 6678 feet, while Santa Fe Springs 233 was a close second with a flow of 6000 barrels from 6608 feet. Oil from both wells showed only a small cut. The company's Santa Fe Springs 168-D, a 4100-barrel well at 6593 feet, was the smallest of the trio, but the oil was clean and the gravity slightly higher than the average.

Only one of the several wells which caught fire two weeks ago after a drilling well burst into flames is now burning, but the fire is so violent that little progress has been made toward extinguishing it. The loss has been estimated at three million dollars. One of the wells was immediately placed on production after the flames were smothered and is now producing nearly 5000 barrels of clean oil.

Production by zones and the number of wells follow:

Zone—	No. Wells	Production
Nordstrum	28	28,000
Buckbee	51	34,600
O'Connell	45	165,000
Upper Clarke	1	600
Lower Clarke	3	1,900
Shallow	217	24,000
Total	345	254,100

The average production for the week was slightly less than the summary above indicates, while the absolute peak for the most productive day was somewhat higher.

Behavior of Well at Santa Barbara is Discouraging

Santa Barbara, Calif.—Absolute failure of the Ring Petroleum Company's Nugent 1 in Santa Barbara field has dampened the spirits of operators in the area and has been a severe blow to operations in general. The well tapped the sand at 2395 feet, but only a flow of water was obtained. Located only 800 feet from the discovery well and regarded as the next producer, the action of the well gives the structure a very faulted appearance and indicates a larger production will not be developed. A dipping of the structure apparently was responsible for the depth at which the sand was found in Nugent 1. Cores revealed a questionable formation, even before the objective sand was reached.

Despite the rush to complete wells in the new field, little alarm was felt concerning the possibility of a large production. Action of the discovery well is still viewed with suspicion, but enough is not known of the structure to predict a positive break in the producing sand.

Santa Barbara has been very lenient with operators and efforts to limit operations is a difficult matter. Several wells shut down immediately after discovery of water in the Ring Petroleum Company well, however.

Representatives of the leading operators recently met and went on record as being opposed to the intensive drilling, but made no recommendations concerning a plan to limit operations in the townlot district. A consolidation of the smaller leases was discussed but such a plan is not possible in some sectors.

Rush Work on Project In Kettleman Hills Area

Coalinga, Calif.—Drilling on the North Dome at Kettleman Hills is being pushed with all possible speed and three or four wells should be completed wtihin six weeks. Plans for drilling the wells to at least the level from which the high gravity discovery well is producing have been altered in several cases, and tests will be made between 6000 and 7000 feet. It is believed the main body of the sand lies below 7000 feet on the North Dome, but the heavy gas pressure encountered below 6000 feet has been taken as an indication that many wells will not have to be drilled to the depths originally anticipated. Little is known of the structure and subsequent wells may find the best sand above the 7000-foot level.

Milham Exploration Company will run a string of tubing to test Kennedy 1 at 6406 feet, or 7000 feet shallower than the bottom of the discovery well. A string of 9-inch casing was cemented at 6392 feet and the test is expected to show the possibilities of the upper part of the sand.

Standard Oil Company of California successfully landed 8⅝-inch casing at 6025 feet in No. 81, a direct offset to Milham Exploration Company's producing well, and is in a position to make a production test at any time. The well is drilling below 6300 feet.

Marland Oil Company cemented 8⅝-inch casing at 5960 feet in Elliott 12-8, also an offset to the discovery well.

Shell Oil Company landed a string of 8⅝-inch casing at 6360 feet in Armstrong 1, but will drill ahead before making a test.

The plan to drill a few offsets to relieve the pressure in the discovery well is feasible, but operators drilling wells immediately offsetting these offset wells are not inclined to shut down entirely and allow the few to produce. This fact is expected to cause some trouble.

Ventura Output Is Up As Restrictions Are Lifted

Ventura, Calif.—Production in the Ventura field showed an increase during the past week, but the jump was caused more from a release of shut-in oil than from new production. Two of the larger companies opened up many of their wells that had been partially shut in to meet the provisions of recent curtailment orders. Some production is still shut in, but there is a possibility that much of this will be released.

The depth of the producing zone in the field is largely responsible for the consistent yield of the old producers and only a small decline is expected during the remainder of the year. The normal decline of wells completed a year or more ago is easily offset by new production.

Two completions during the week were considerably smaller than the average of the year, one showing a large percentage of water. Shell Oil Company's Taylor 2, completed at 7150 feet, came in with an initial production of 330 barrels, while Associated Oil Company's Hartman 17, drilled to 7070 feet, was completed with an initial production of 650 barrels. Oil from the latter showed a cut of 35 per cent.

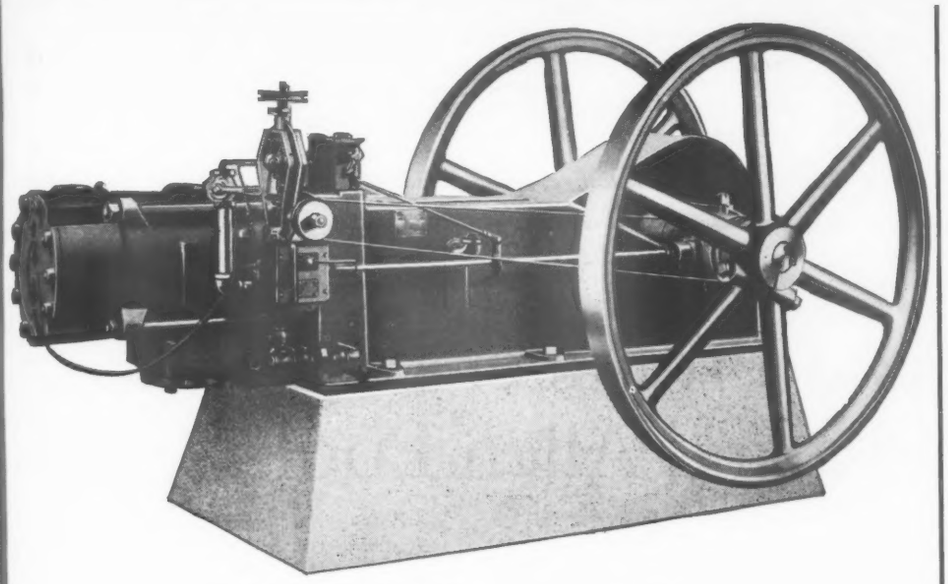
Penn-Kan Oil Company, operating in the extreme southern end of the field and in an extension discovered a year ago, has cored a streak of oil sand between 7330 feet and 7350 feet in Francis 1. A string of casing will be run and a production test made.

Point Conception Test Has Spectacular Blowout

Santa Barbara, Calif.—Western Gulf Oil Company's Hollister 1, a wildcat test near Point Concepcion, staged a spectacular blowout while the cement was being drilled out for a production test at 3115 feet. The well was brought under control after flowing gas, mud and water for 24 hours. A string of 10¾-inch casing had been cemented at 3088 feet for a test of 25 feet of oil sand and shale. Only a few feet of the cement had been drilled out below the shoe of the casing when the well blew out. The gas flow was estimated at 25 million cubic feet.

XUM

FRANKLIN VALVELESS OIL AND GAS ENGINES



OG—Franklin IsRight for Pumping

Have you gas fuel available? If you have, here's the most successful, simple and economical pumping engine, we believe, has ever been placed upon the market.

It's the new and improved Franklin Gas Engine, identified by Type OG. Try it, keep a comparative record and you'll come back for more just as many other operators have done.

The Franklin Type OG comes in two pumping sizes: 12x16 (40 HP) and 13x16 (50 HP). They are interchangeable on the same foundation with each other or with the larger drilling engine.

Convertible at but slight expense into Type OF Oil Fuel engine.

There are enough reasons given in the adjoining column for you to want a Franklin for every well you own. And don't forget that inter-changeability feature.

Prices

Type OG 40 HP Gas Engine
$1300.00 F. O. B. Franklin

Type OG 50 HP Gas Engine
$1800.00 F. O. B. Franklin

Clutches

Reversible or One Way Clutches can be furnished to meet your requirements

Franklin Valveless Engine Company
Franklin, Pa.

Some of the Franklin OG Good Points

Enclosed type
Low Fuel consumption
100% inter-changeability
Simplicity

Piston rod is fitted with metallic packing which never needs adjusting or replacing

Every spring exposed.

Complete simplicity with practically no adjustment

In case of belt breakage engine automatically stops

Fuel pump driven by eccentric running in oil bath

Bearings are removable and reversible

Only standard threads used. No special wrenches required

Cylinder has 3 point, forced feed lubrication

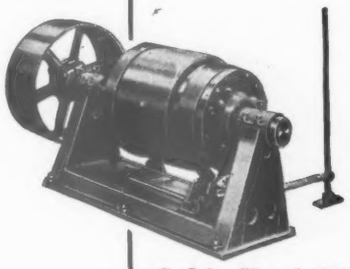
Balance of lubrication is splash feed

Pistons are air cooled

All nuts subject to vibration are castillated and fastened with cotter pins

Most economical to operate in fuel, lubricant, water and repairs

Easy to start.



Type BG Clutch for Cable Tool Drilling or Pumping

A vast improvement over the former type of clutches.
Driven from pulley on engine. Permits the use of a larger diameter pulley and makes possible a slower clutch speed. Operates by hand lever on derrick.
Construction and design prevent Reverse Clutch Troubles.
PRICE—$1200.00 F. O. B. Franklin, Penna.

Distributed by

OIL WELL SUPPLY COMPANY

Branches in All Oil Fields

Oklahoma--Kansas Field Notes

WARREN BAKER, *Staff Representative, Tulsa, Oklahoma*

Wilcox Sand Producer Between Wewoka and Allen Pools

TULSA.—Finding a Wilcox sand producer midway between Wewoka and Allen fields and completion of the second deep horizon producer in Oklahoma City pool featured activity in Oklahoma during the past week.

Sinclair Oil & Gas Company's Davis 2, Section 7-6-8, between Wewoka and Allen fields, opened a new Wilcox sand producing pool, when it flowed 2385 barrels the first 13 hours and 4024 barrels the next 24 hours. This production came from the Wilcox sand at 4476-77 feet.

The well is apparently on the extreme southern edge of the new field. Three offset tests have been drilled to the Wilcox sand, all found water in that horizon. Locations to the west and south are small Simpson producers. Although it is too early to predict the possible size of the new field with any accuracy, it is generally thought that the producing area will probably be small.

For some time operators have been trying to trace a trend running from Cromwell field south through Wewoka to Allen field, and the Sinclair discovery proves the existence of this ridge or high, which on the surface is evident.

The new producer is located about six miles north of Allen pool and about the same distance south of Wewoka field. It is but three-quarters of a mile west of the Seminole-Hughes County boundary line.

Finding a big Wilcox sand producer came at a time when the hope of such production was at a low ebb, but it is doubtful if there will be a big drilling campaign, at least until other tests have been completed and indicate the possible size of the structure.

Sinclair Gets Second Well at Oklahoma City

Sinclair Oil & Gas Company finally succeeded in getting through the gas sand and into the deep producing horizon at Oklahoma City with its Stamper 1, NEc SW NW Section 30-11-2w, one-half mile southeast of the discovery producer. This well topped the lime at 6340 feet, with the real producing horizon penetrated at 6435 feet. Total depth is 6465 feet. The last five feet of hole showed the formation softening. The well made 2351 barrels the last 24 hours after maintaining this flow for several days.

The finding of production to the southeast of the producer greatly encourages operators, since the structure lies mostly to the north of the producer. The initial production of the Sinclair Oil & Gas Company's Stamper was about half of that in the discovery well.

Representatives of all the companies having acreage in the district met and outlined a drilling program for the second crop of wells. Thirty-one tentative locations were made, as compared with 21 approved on the first crop started after the completion of the discovery well.

The new locations are so spaced as to take care of offsets and to aid in the defining of the structure. Drilling these locations to the deep 6400-foot horizon would call for $5,000,000. The plan is not to drill the tests until the companies deem it necessary, which will not be until after more completions. A few of the locations in the vicinity of the Stamper will start at once.

Mid-Kansas Oil & Gas Company's two tests on its Fortson lease in Section 24-11-3w, are due to penetrate the lime producing stratum within a day or two. Both wells are but about 20 feet short of 6400 feet. No. 1 has the tools stuck at the last report, after gas had blowed them up in the hole 200 feet. The crew was unable to get them loose. This well filled up with oil and made one flow of 100 barrels.

The discovery Oklahoma City well, Indian Territory Illuminating Oil Company and Foster Petroleum Company's Fee 1, C SE SE Section 24-11-3w, is doing 2500 barrels daily and between 700 and 800 barrels of water.

St. Louis-Pearson Attractive

One of the most active and promising areas in the state today is the Pearson-St. Louis link. There are about 40 drilling wells in Sections 8, 9, 15, 16 and 17, township 7-4e, while 10 wells have been completed as producers. Magnolia Petroleum Company's Latimer 1, SE SE NW Section 17-7-4, opened the region last April with Simpson sand production.

Independent Oil & Gas Company and Westland Oil Company's Rhodd 1, NWc Section 16-7-4, completed a couple of weeks ago, is doing 3750 barrels daily from the Simpson sand. Independent Oil & Gas Company and Darby Petroleum Company's Pappan 1, NE SE SE Section 16-7-4, across the section from Rhodd 1, is the latest outstanding completion. It is flowing 1400 barrels daily from the Hunton lime at 3848 feet.

Directly north of the Independent Oil & Gas-Westland Oil Company's producer on the Rhodd farm is Darby Petroleum Company's Nixon 1, SWc Section 9-7-4. It will be one of the next wells completed. The six-inch casing has been cemented in the Viola lime, which was topped at 3948 feet. It is only five feet lower on the Viola than the Rhodd well and its chances are good for a producer.

Independent Oil & Gas Company's Newell 1, SWc SE Section 17-7-4, near the Magnolia-Latimer producer, is running about 600 feet low. It has just topped the Woodford at 3975 feet.

In the Kelly area, lying directly north of St. Louis, in township 7-4e, two wells soon will test the Wilcox sand. Kiestler & Manning, Martin & Erwin, McGraw Oil Company, Sinclair Oil & Gas Company and Shaffer Oil & Refining Company's Kelly 1, discovery Hunton lime producer, is being carried to the Wilcox sand. It is a direct east offset to the Independent Oil & Gas Company's Barrows 1, discovery Wilcox sand producer. The discovery Wilcox sand well is swabbing around 400 barrels daily.

Gypsy Oil Company's Kennedy 1, NWc SW Section 1-7-4, found 1500 feet of oil in the hole from the Hunton lime and is drilling ahead to the Wilcox sand. It found the Sylvan shale at 4080 feet.

Another dry hole to the northeast of the Kelly area was added when Pure Oil Company's Tolan 2, SW NW Section 1-7-4, filled up 1000 feet with water at 4120 feet in the Hunton. It will be carried to the Wilcox sand.

Many Failures at Asher

Many failures resulted in virtually flooding the Asher field with water and washing it off the map as a potential market threat. Production of the field is averaging around 9000 barrels daily

from eight wells, with four wells producing better than 7500 barrels of this amount.

The past week saw the testing of the Wilcox sand for the first time. Slick's Bledsoe 2, SWc NW Section 20-6-4e, penetrated the Wilcox sand three feet to 4021 feet. It was carrying a hole full of water. Nothing showed.

Some of the recent failures were as follows: Simms Oil Company's Hatley 1, SWc Section 17-6-4, top Viola lime 3817 feet, first water 3970 feet, hole full of sulphur water at 3975 feet; Prairie Oil & Gas Company's Beebe 1, NW SE SE Section 19-6-4, hole full of sulphur water 3945-3980 feet; Independent Oil & Gas Company's Lynch 1, SE NW NW Section 20-6-4, hole full of sulphur water 3920-33 feet; Prairie Oil & Gas Company's Lynn 1, SW NW NW Section 20-6-4, hole full of sulphur water at 4007 feet, Lynn 2, hole full of sulphur water from 3903-3932 feet; Slick's Bledsoe 4, NE SW NW Section 20-6-4e, top Simpson sand 3835-3930 feet, hole full of sulphur water; Hall & Briscoe's Townsite 1, SE SW SE Section 18-6-4e, total depth 3900 feet, hole full of sulphur water.

Eastern Kansas

Wichita—A submerged granite ridge, running through the center of Coffey County and extending into the Panama gas area of Franklin County, eastern Kansas, has been located by the Geophysical Exploration Company, of Oklahoma City, according to announcements. This company has been making geological and geophyscial surveys in Lyon, Osage and Coffey Counties for several months.

There are a number of good gassers in the Panama area. Empire Gas & Fuel Company has drilled them. The gas is found around 1200 feet. The Bartlesville sand has been found in Coffey and Osage Counties, where it carried some oil in the top with water beneath. It is believed that with the location of the granite ridge with the magnetometer that tests can be drilled on locations that will find the sand sufficiently high to eliminate the water.

Blocks of leases are now being assembled, and drilling will probably follow.

New Test at Macomb

Tulsa.—Sunray Oil Company has purchased a one-half interest from the Cal Cul Oil Company in the east half of the northwest of Section 9-8-3e, in the Macomb area of western Pottawatomie County. Material for a test is being moved in. The location has been made in NWc NE NW Section 9-8-3e.

This location is about four miles northeast of the Superior Oil Corporation test in Section 24-8-2e, which created so much attention when it showed in the Hunton lime. The Sunray-Cal Cul location is a very important one and its outcome will mean much to the westward trend of the play from the Greater Seminole area, toward Oklahoma City. It is reported that a very promising geologic structure has been worked out under the new test.

Sasakwa Wildcat

Tulsa.—Gypsy Oil Company's important wildcat test in Section 9-6-7, north of the Sasakwa area of the Allen field, in Seminole County, Oklahoma, is being closely watched by oil operators of that area. This test has found the Sylvan shale at 4160 feet, the Viola lime at 4188 feet. The six-inch casing has been set at 4212 feet in the Viola lime and cable tools are being rigged up. The thin section of Sylvan shale found is thought to be a favorable indication. A few tests in the area have been carried to the Wilcox sand, but nothing was found.

Gasser North of Yeager

Tulsa.—Indian Territory Illuminating Oil Company's Scott 1, NE NW SE Section 6-8-9, north of Yeager in Hughes County, Oklahoma, has been shut in as a 20,000,000-foot gasser from the Cromwell sand at 3425-3433 feet.

Clearview Gasser

Tulsa.—Mid-Continent Petroleum Corporation and Wigdon & Long's McCoy 1, SW NE NE Section 31-11-11e, near Clearview, in Okfuskee County, Oklahoma, had sand from 3081-89 feet and is being completed for 25,000,000 feet of gas.

Kingfisher County

Tulsa.—Galt Brown Company No. 1, C NW SE Section 6-16n-17w, near Kingfisher, in Kingfisher County, western Oklahoma, found a show of gas at 5010 feet and is drilling ahead below 5100 feet.

Konowa Wildcat

Tulsa.—McCulloch Oil Company's Powell 1, NW NW Section 11-6-5e, near Konowa, in Seminole County, Oklahoma, topped the Viola lime at 4316 feet and is drilling ahead in that formation.

Missouri Wildcat

Kirksville, Mo.—Earl Smith & Company of Olathe, Kansas, are starting a 3200-foot wildcat test near Kirksville, Putman County, northeastern Missouri. Because of its remote location from oil producing centers the test will be of much interest, especially to geologists.

New Tidal Office

San Antonio, Texas.—The Tidal Oil Company, which maintains Texas headquarters at Fort Worth, has established a district office here in the Milam building in connection with its increased activity in drilling and leasing in the Southwest Texas district, centering along the Balcones fault zone. Adolph Dover, geologist and land man, is in charge of the new office.

A. P. I. Directors to Meet During Oil Exposition

Tulsa.—A meeting of the directors of the American Petroleum Institute will be one of the features of the International Petroleum Exposition period. The directors some time ago formally endorsed the scope and purpose of the exposition and at a meeting in New York decided to come here for the exposition and attendant events.

The extent of foreign participation will be great, it is expected. Plans are on for the formal and official invitations to nations interested in the oil industry to send delegates. The International Congress, at the outset of the exposition, will be of unusual interest this year, members of the board said. There will be many meetings of sections of the industry. A special auditorium will be provided for that purpose.

Western Kansas Recent Strikes Attract Oil Men

Wichita.—Recent completion of a number of new producing spots in Western Kansas is causing much attention to be devoted to that district.

Phillips Petroleum Company et al's Sophus 1, SWc NE Section 9-13-19w, in Ellis County, filled up 2500 feet with oil in three hours at a depth of 3595 feet in the Oswald lime. A 12-hour swabbing test recovered 340 barrels of 34.7 gravity oil.

Core-drill tests and the test for oil have located a well-defined ridge extending from the Salina to the Smoky Hill rivers, a distance of 25 miles.

Barnsdall Oil Company's Lauck 1, C SW Section 35-18-21w, Ness County wildcat well, drilled out the plugs within eight feet of the bottom and cleaned out. One hundred feet of water apparently from the bottom of the hole was found. Total depth is 4229 feet. Previously the well had flowed at the rate of 10 barrels per hour of oil and water.

Prairie Oil & Gas Company and T. B. Slick's Sellans 1, SWc NE Section 36-15-13w, Russell County, West Kansas, has 2800 feet of 38.1 gravity oil in the hole at 3355 feet.

New Producer at Greenwich

Development in Central Kansas was featured by the finding of a chat producing well. The main field produces from the dolomite Simpson below the Mississippi lime at around 3150 feet.

Shell Petroleum Corporation's Community 1, NW SE SW Section 15-26-2e, three-quarters of a mile southwest of production, topped the chat at 2922 feet and at two feet in was flowing a four-inch stream of 44 gravity oil into the slush pond.

Lario Oil & Gas Company's Clancey 1, SWc Section 10-26-3e, near Benton in Butler County and six miles east of the Greenwich field, surprised operators by its high swabbing tests. The well is rated good for better than 250 barrels. The producing formation is chat from 2750-61 feet, and the oil tests 42 gravity.

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

Texas Company Extends Humble Field Area

Houston.—The recently opened deep sand area on the southeast flank of Humble field, Harris County, was extended approximately 2000 feet west and a little east June 23, when The Texas Company completed Landslide 264 as a 600-barrel flowing well at 4160 feet. In the immediate vicinity of this well, Humble Oil & Refining Company's Williams 1 last week flowed salt water, and wash pipe is being pulled. Location has been made for Williams 2.

There are now more than a dozen drilling operations at Humble, all but two being on the southeast side. In that active area The Texas Company's Landslide 262 is washing to bottom, with the total depth 5332 feet; Landslide 263 is drilling sticky shale at 4677 feet; Stevenson 40 is rigging up; Wheeler & Pickens 21 is shut down at 4298 feet, having encountered a gas sand which gave trouble. Derricks are up for Landslide 265 and 266 and Carroll Oil & Gas Company 29. South Texas Petroleum Company's Morris 5 is reaming to set 9⅝-inch casing at 4525 feet; Morris 6 is also reaming to set that size casing at 4170 feet, and Bert 1 is drilling shale at 5395 feet. Marland Oil Company's Lee 1 is drilling sandy shale at 4140 feet. Harvey Smith's Bailey 1 is drilling gumbo at 1229 feet.

In the north part of the Humble field The Texas Company is rigging up Koehler 35, and Sun Oil Company's River 47 is drilling.

Peak Output Established At Salt Flat Field

Houston.—The Salt Flat field, Caldwell County, reached a new daily production peak on June 18 when the total yield was 52,826 barrels. The week ending June 22 was also the peak week for the field, the daily average during that period having been 52,000 barrels.

During that time a relatively large number of wells were completed. There were 16 tests completed, including 15 producers. Ten of these producers were Humble Oil & Refining Company wells.

Gulf Production Company finished Carter 13 for 150 barrels at 2687 feet; Northcut 7 for 1700 barrels at 2691 feet; and W. L. Smith 7 as a failure at 2828 feet.

In the south part of the field there were several completions. Suttle et al's Malone 2, which had been drilled to the lime at 2650, was completed for 100 barrels in the Austin chalk at 2330 feet. Lutex Oil Company completed T. Wilson 5 for 150 barrels at 2702 feet. T. C. Hadley finished Merriweather 2 for 30 barrels at 2743 feet.

Humble Oil & Refining Company completed the following wells, all in the northern part of the field: Floyd Gray 2-A, 725 barrels at 2677 feet; Moses & Baggett 8-B, 300 barrels at 2667 feet; Moses & Baggett 9-B, 300 barrels at 2708 feet; Floyd Gray 2-C, 400 barrels at 2678 feet; Addie Hinds 3-A, 500 barrels at 2694 feet; J. L. Northcut 3-A, 600 barrels at 2688 feet; J. L. Northcut 1-B, 100 barrels at 2701 feet; J. L. Northcut 2-B, 714 barrels at 2696 feet; Clyant Smith 2-B, 600 barrels at 2681 feet, and J. R. Tiller 2-C, 580 barrels at 2696 feet.

Barbers Hill Extended By New Completions

Houston. — Two relatively large producers were completed during the past week in the south part of Barbers Hill, one of them extending the productive area nearly 100 feet eastward. Including these two new wells, there are now seven wells producing from the sand discovered January 29 by Yount-Lee Oil Company's Chambers County Agricultural Association 1; and from the most westerly to the most easterly of those seven is a little over 900 feet.

Sun Oil Company's Chambers County Agricultural Association 2 came in June 23 flowing 98 barrels per hour at 5400 feet. Temperature of the crude at the well was 88 degrees, and the well pressure was 425 pounds. The early part of this week the well was flowing around 1800 barrels daily. This producer extended the productive area eastward.

Yount-Lee Oil Company's Chambers County Agricultural Association 6, located about mid-way along the productive area of the south flank, came in at 5002 feet, flowing at the rate of 1680 barrels daily. It has increased, however, and according to late reports, was flowing around 2100 barrels daily.

Sun Oil Company's Chambers County Agricultural Association 1, located 200 feet south of the newly completed No. 2, is still making around 250 barrels daily, pumping. Yount-Lee Oil Company's Chambers County Agricultural Association 4, located 150 feet south of the nearest producer, No. 2, is drilling shale at 6515 feet. Republic Production Company's Kirby 1, a virtual wildcat on the south end of the east flank of the dome, is drilling shale and lime at 4350 feet. The Humphreys Corporation's Kirby A-8, located on the northwest flank of the field, and also a wildcat insofar as drilling for the now productive deep sands at Barbers Hill is concerned, is down 3452 feet in sand and lime.

On the east side of the field Talbot & Markle's Schilling 1 is the only test down to an interesting depth. It has set casing at 5075 feet, with the bottom of the hole at 5174 feet. Rexall Petroleum Company's McLean 2 is drilling gumbo at 4183 feet, and its Smith 1 is drilling gumbo and lime at 3725 feet. The Humphreys Corporation's Tarbutton 1 is sidetracking at 1462 feet; Kirby H-1 is drilling sandy lime at 4306 feet; Kirby B-2 is drilling sand and lime at 4160 feet; Ilfrey 1 is drilling shale at 2746 feet and Nos. 2 and 3 are rigging up.

Abandonments Vindicate Seismic Instruments

Houston. — Standard Oil Company of Louisiana topped salt at 3450 feet in its Wilbert 2 on the Bayou Blue dome, Iberville Parish, Louisiana, and has abandoned the test in salt at 3620 feet. This is the third completed test of the dome. The first, Union Sulphur Company's Schwing 1, located 577 feet south and 239 feet west of the center of Section 74-9s-10e, was abandoned at 2850 feet without having had any important showings. The second test, Standard Oil Company of Louisiana's Wilbert 1, located 500 feet north and 500 feet west of the southeast corner of SW SE Section 74-9s-10e, proved the existence of a salt dome, being abandoned in salt at 4481 feet. The test that has just been abandoned, Standard Oil Company of Louisiana's Wilbert 2, is 1512 feet due north of Wilbert 1. Bayou Blue is one of the numerous salt domes found in South Louisiana during the past few years through the use of seismic instruments.

Two Wells Abandoned on New Salt Domes

Houston.—Gulf Refining Company of Louisiana abandoned one test on each of two relatively new salt domes of South Louisiana during the past week. At Sorrento, the new field east of the Mississippi, it abandoned United Lands Company 14 in salt at 4050 feet. Sorrento is in Ascension Parish. At Loreauville, Iberia Parish, State Z-9 was abandoned in salt around 875 feet.

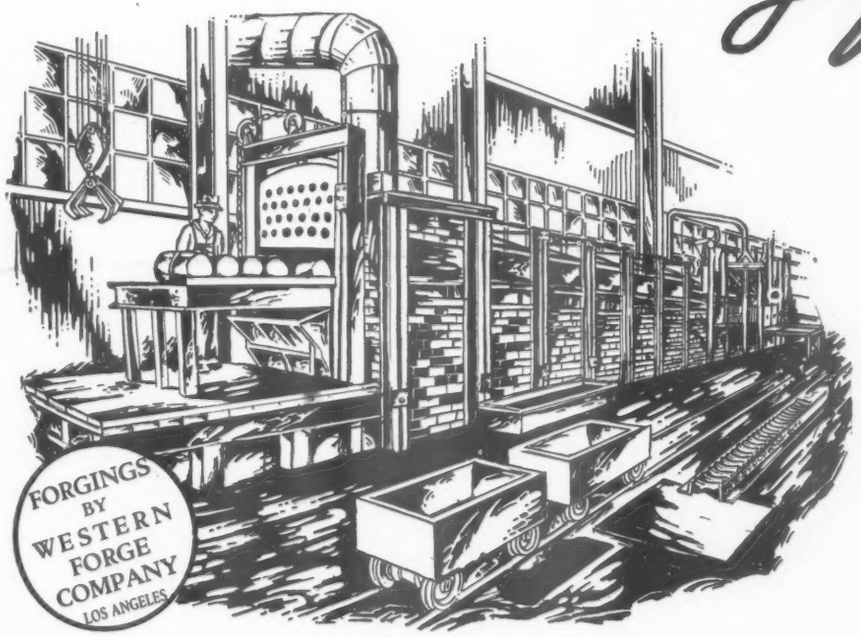
Clay Creek

Houston.—Sun Oil Company has abandoned Schirmer 2 at Clay Creek, Washington County, at 3635 feet. Its Caraway 2 is drilling at 1325 feet; Hunt 1 is drilling shale at 1473 feet; and G. F. Grote 7 is a derrick. Daily production of Clay Creek field is around 2600 barrels.

XUM

FOR GREATER STRENGTH

Continuous heating furnaces



insure UNIFORMITY in heating during PRESS FORGING process for

EMSCO TOOL JOINTS

The continuous heating furnace facilitates production, resulting in low operating costs. It supplies a continuous stream of properly heated slugs for the extruding press. But... most important... the slugs are loaded into the furnace at the cool end and *S - L - O - W - L - Y* heated to the proper temperature.

The sudden application of heat to cold steel may seriously injure the structure.

All EMSCO and D+B Products (except Derricks) Sold Exclusively in Mid-Continent Fields by THE CONTINENTAL SUPPLY COMPANY

EMSCO STEEL EQUIPPED WELLS ARE SAFE

This is the third of a series of advertisements featuring the Emsco *process of manufacture of Tool Joints.*

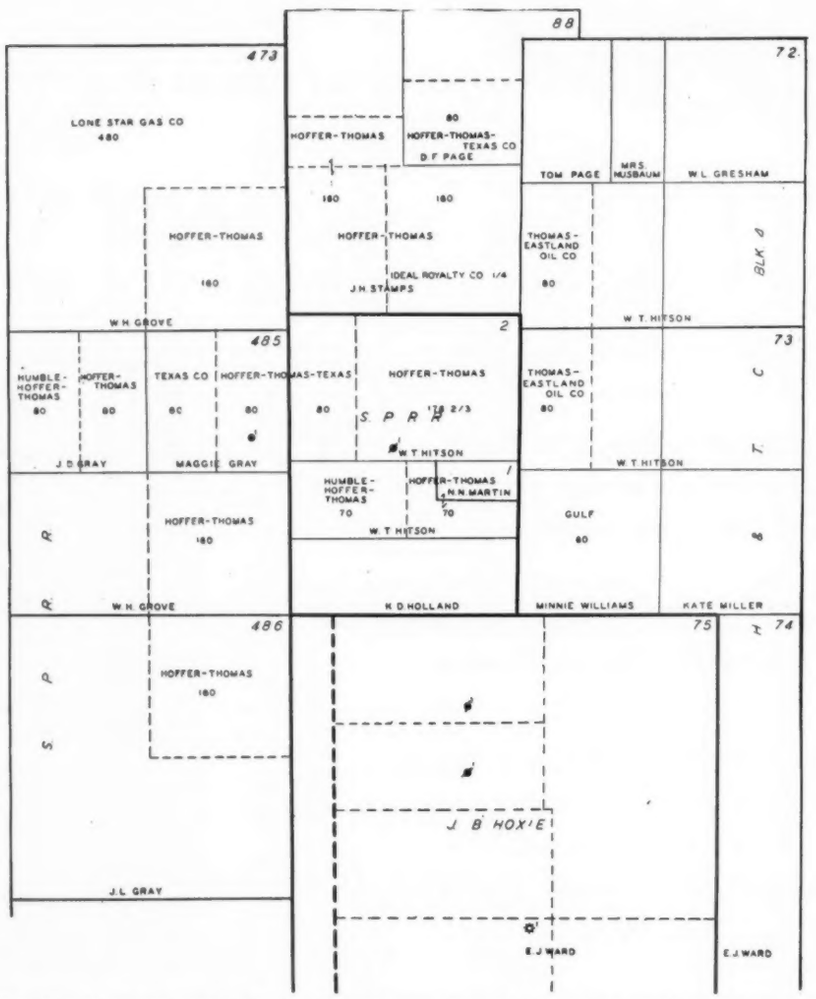
Well in Eastland Sand Horizon Opens New Texas Pool

RANGER, Texas.—Completion of a 850-barrel flowing well from the Eastland sand horizon in semi-wildcat territory, located about five miles north of Cisco in Northwestern Eastland County, by The Texas Company-Hoffer Oil Corporation and J. Elmer Thomas during the past week opens an attractive area for development. Several new tests are to be drilled on acreage offsetting the discovery lease. A revival of interest in this general section of the county has followed in the wake of the above completion, as the Eastland sand horizon usually registers an attractive crude yield per acre.

This new semi-wildcat strike is located at the center of the south one-half of the Maggie Gray 80-acre lease, being the east one-half of the northeast quarter of Section 485, S. P. Ry. survey, known as the Hitson pool. The Texas Company holds an undivided one-half interest in the lease and well and has operating control, while the Hoffer Oil Corporation and J. Elmer Thomas equally share the remaining ownership.

Maggie Gray 1 logged the top of the sand at 3446 feet and was drilled to a total depth of 3456 feet, with a surface elevation of 1496 feet. The oil tests 40 degrees gravity corrected, and is being run for purchase by the Humble Pipe Line Company. The Eastland Oil Company, which has protection acreage to the east of the producer, drilled the producer on a turnkey contract. Cable tools were used in the drilling of this producer, and the average cost of a completed well in this section of the county is placed at $25,000, as the three large strings of casing are pulled upon completion, leaving only two, or three strings in the hole. A string of 5-3/16 inch casing was set in the Maggie Gray 1 at 3420 feet, owing to a bad fishing job encountered above this level, but the average well can be completed with six-inch pipe set on top of the pay.

Geological efforts of Roy A. Reynolds, Fort Worth consulting geologist, were directly responsible for the development of the Hitson area, and the first test drilled on the W. T. Hitson farm, located about one-half mile east of the above producer, by the Hoffer Oil Corporation and J. Elmer Thomas, was junked at 3401 feet while in process of completion. Hitson 1 made three million cubic feet of wet gas and light spray of oil from the Eastland sand horizon, and was being deepened to a lower lime formation when casing trouble halted further progress. A good show of oil was also passed up by Hitson 1 in the Caddo lime, while only a small show appeared at this level in the Maggie Gray 1.



Showing lease ownership in the Hitson area, located five miles north of Cisco and in northwestern Eastland County, where 850 barrel flowing well has been completed by The Texas Company-Hoffer Oil Corporation and J. Elmer Thomas on the Maggie Gray farm, Section 485

Big Gas Well

The Morris pool, Coleman County, contributed a 20 million cubic foot gas well early this week when the Eastland Oil Company and Chestnut-Smith Corporation's Keeney 2-A drilled into the 2000-foot sand after setting casing at 1966 feet. This gas well is a north offset to the same interests' Kenney 1-A, which encountered oil pay May 16, at 1992-2002 feet, and continues to average 590 barrels of 42 degree gravity oil daily. The above two concerns opened the Morris pool, which centers on the William Webber and R. Cockran surveys, located east of the Coleman-Echo highway and have scored several unusually prolific producers since the discovery well was completed in December, 1927. Their Morris 1-B continues to flow 660 barrels of high gravity oil daily after being on production for more than a year.

In McCulloch County, Roth and Faurot's Smith 2 has been completed with an initial production of 2,400,000 cubic feet of gas at 1567-77 feet, with a rock pressure of 820 pounds.

S. B. Owens, Inc., has acquired controlling interest in the wildcat discovery well reported last week as having been completed on the west line of Shackleford County by Frank A. Oyster, Byron Rife and C. B. Taylor on the Davis Brothers ranch. This well is located at the center of the SW¼ of NE¼ Section 15, Block 14, T&P Ry. survey. It pumped 35 barrels of oil and a small amount of water on initial test from saturated lime at 1606-10 feet, with a total depth of 1614 feet.

New Pipe Line Company Located at Wickett

Fort Worth.—Home offices of the Wickett Pipe Line Company incorporated last week in Texas for $100,000 have been established in Midland. The new pipe line company is constructing a new line to Shipley pool, in Ward County, from Wickett.

W. B. Hassett, Tulsa, is president. Directors are C. R. Armstrong, Lock Haven, Pennsylvania, and John M. Shipley, Midland.

Louisiana-Arkansas Field Notes

Big Dixie Extension Well Quits Flowing After 14 Days

SHREVEPORT.—After flowing for 14 days, Gulf Refining Company's Pope Oden 1, in NEc Section 18-19-14, Caddo Parish, in the Dixie extension southeast of Pine Island, has ceased to flow. The well gauged 3287 barrels for the first 24 hours that a measurement was obtained. Depth is 2400 feet. Rod and tubing are being installed preparatory to pumping the well.

This action of the Pope Oden 1 leaves not a single well flowing in the new extension field, opened when the D. C. R. Oil Company's Hunter Estate 1, in NWC Section 17-19-14, came in producing 150 barrels of oil at 2404 feet. This well and 1100 acres surrounding it were sold to the Standard Oil Company of Louisiana. The action of the best well the field has recorded has left the following producers: Gulf Refining Company's Pope Oden 2, Section 18-19-14, pumping 17 barrels daily; Standard Oil Company of Louisiana's Hunter Estate 1, Section 17-19-14, the discovery well, pumping 32 barrels daily; the same company's Hunter Estate 2, a northeast offset in Section 8-19-14, pumping 85 barrels daily, after being completed with a daily initial of 70 barrels, and Oden 1, Section 18-19-14, pumping 125 barrels daily.

Ohio Oil Company's Hunter Estate 1, in NE NW Section 17-19-14, an eastern offset to the discovery well, and 300 feet south of Standard Oil Company's Hunter Estate 2, which has bidden fair to be the next test in the field, has the swab stuck in the hole and is flowing by heads from 2414 feet. Six and five-eighths-inch casing was set at 2375 feet. Another hole nearing the testing stage is Sam Gold and associates' Henderson 1, SW NE Section 17-19-14, which is coring at 2350 feet.

Other active tests in the new field are: Walter Ray and associates' Hunter Estate 1, Section 8-19-14, rigging up; Palmer Corporation's Hunter Estate 1, Section 8-19-14, 12½-inch casing set at 120 feet; Ohio Oil Company's Hunter Estate 2, Section 17-19-14, spudded; Standard Oil Company's Henderson 2, Section 7-19-14, drilling sand rock at 1943 feet; Hunter Estate 5, Section 17-19-14, drilling shale and boulders at 2308 feet; Pope Oden 2, Section 18-19-14, drilling chalk rock at 1505 feet; Gulf Refining Company's Pope Oden 3, Section 18-19-14, drilling hard chalk rock at 1595 feet after topping gas rock at 850 feet; Pope Oden 4, Section 18-19-14, drilling blue gummy shale at 778 feet.

Ray and associates' Hunter Estate 2 and S. T. Onyett, Trustee's, Dixon 1, Section 10-18-14, six miles south and slightly east, were the only two new locations made in the district during the last week.

Mount Holly Well

After a series of failures in Mount Holly district of Ouachita County, Arkansas, between Smackover and Stephens fields, McDonald Brothers, who completed one of three small producers in the area, appear to have promise of another producer in Wilson A-2, Section 25-15-18, in the same section with the other producers. This test showed 18 joints of oil and two joints of rotary drilling mud in eight minutes in a drill stem test from 2774 to 2781 feet. Sand was encountered from 2776 to 2781 feet. Six and five-eighths-inch casing is being set for a test. A core from 2758 to 2761 feet showed oil sand.

Meanwhile Charles McDonald's Wilson B-3, in the same section, is drilling at 2350 feet.

Johnson-Gummer Oil Company, drilling Cargile 1, a wildcat in Section 4-18-13, Union County, Arkansas, tested dry with a light show of oil through drill stem from 2275 to 2412 feet. Arrangements are being made to core ahead. The test had cored sandy shale from 2278 to 2281 feet.

In the northeast extension of Champagnolle, in Union County, Arkansas, Ohio Oil Company's M. H. Nash 1, Section 7-17-13, was completed as a five million foot gas well with a spray of oil and salt water, after liner was set at 3086 feet. Dr. Rushing's Lynn 1, in the second hole, Section 7-17-13, is drilling at 2384 feet. Water has appeared in Pure Oil Company's M. H. Nash 2, NW SW Section 7-17-13, completed week before last flowing 768 barrels in the first 24 hours through a ⅜-inch choke. About 25 per cent. of the total daily yield is salt water.

Magna Production Company's 2-B El Dorado Realty Company, Section 8-17-13, a quarter of a mile east of Champagnolle production, was abandoned as a salt water hole at 3084 feet. Lion Oil Refining Company is coring at 3028 feet in El Dorado Realty 1, Section 7-17-13, after setting liner at 3020 feet with seven feet of sand and testing 2000 feet of salt water with a good show of oil. Ohio Oil Company's L. S. Adams 2, Section 12-17-14, was completed as a five million foot gas well at 3016 feet.

In the southern edge of Champagnolle, Lion Oil Refining Company's Rowland 5, Section 15-17-14, was abandoned as a salt water hole at total depth of 2700 feet, with casing in the hole. The same company's Stowe 1, Section 4-17-14, was abandoned as a dry hole at 3313 feet.

Extension Possible

Prospects for a five-mile northern extension of the Zwolle oil field in Sabine Parish, where R. L. Gay, Trustee, and H. D. Easton, have two flowing wells, appeared possible during the week when the same operators' Long-Bell Lumber Company 1, NE NW Section 26-8-14, topped the Nacatosh at 1839 feet, more than 300 feet above the same formation in the two producers. Two feet of cap rock was encountered just above the Nacatosh. Hole was made in soft lime sand showing oil and gas from 1839 to 1850 feet. A string of 8¼-inch casing was set at 1839 feet, and a test will be made in about a week.

Natural Gas Men Protest Flood Control Plan

Monroe, La.—A meeting to oppose the Jadwin Flood Control plan of the federal government under its present form was held at the Virginia Hotel here June 17 by the Flood Control committee of the American Mining Congress and representatives of several of the operating companies interested in the protection of the natural gas industry from damage which it is believed would result from the plans being put into effect.

Opinion was expressed by production managers attending the conference that one major flood, under the Jadwin plan, would completely ruin the Richland gas field and would cause serious damage to the Monroe gas field in Ouachita, Morehouse and Union Parishes. This applies particularly to the Bouef River basin.

The following were present: H. W. Engstrom, general superintendent, United Carbon Company, Monroe; H. C. Otis, production manager, Arkansas Natural Gas Corporation, Shreveport; H. H. Russell, city attorney of Monroe, representing Mayor Arnold Bernstein of Monroe; W. E. Wilson, secretary-treasurer, Tensas Basin Flood Control Association, Monroe; L. W. Burrow, production manager, Industrial Gas Company, Monroe; A. L. Black, engineer for Ford, Bacon and Davis, Birmingham, Alabama; Norris C. McGowan, president Louisiana Gas and Fuel Company, Shreveport; Major W. J. Parkes, vice-president and general manager, Industrial Gas Company, Monroe, and H. W. Perritt, manager Monroe office, Louisiana Department of Conservation, minerals division.

News From Rocky Mountain Fields

Seek Uncontaminated Gas on Byron Lake

Byron, Wyoming.—The Lovell Gas Company will drill another well on the Byron Lake structure, east of the Garland Dome, northern Wyoming, and is moving in and building derrick so that the work may be started immediately.

It is this company's aim to develop a gas supply for its community which will be free from the sulfur which has heretofore presented such a problem. The first well on this structure found but a small showing of oil in the sand which was expected to be gas producing, and this was followed by a water encroachment. Casing was run and cemented to effect a shutoff, and the well has been standing idle since.

Well Under-rated

Casper.—Ohio Oil Company's operating subsidary on Hiawatha dome, the Mountain Fuel Supply Company has completed its No. 1 Reiter-Foster as a larger gas well than it was estimated. It is producing three million feet at 3585 feet in a strange horizon in this field. Its estimated production has been but one million feet.

Moody-Seagraves Buys Control of Company

Casper. — Official announcement of the purchase of 80 per cent. of the stock of the Cody Petroleum Company by the Moody-Seagraves Corporation was made in Casper this week. Holdings of the former are in northern Wyoming, where it controls several wildcat structures, and in the Oregon Basin oil and gas field where it holds a large block of important acreage. This is the first entrance of the Moody-Seagraves interests into the northwestern territory, having heretofore been identified with operations in oil and gas in southern and southwestern states.

Cody Petroleum Company has three drilling wildcat wells, and will drill as many more this summer. It is one of the pioneer operators in Oregon Basin.

Rapid Progress on Line From Wyoming to Utah

Salt Lake City.—The Uinta Pipe Line Company reports very rapid and most satisfactory progress in the laying of its trunk gas pipe line from Green River, Wyoming, to Salt Lake City. The lines from the junction east of Green River are being laid by Mountain Fuel Supply Company. About 3000 men are employed on the project to take natural gas from southwestern Wyoming to cities in northeastern Utah and eventually southeastern Idaho.

Rumored Oil Showing

Frannie, Wyoming.—It is reported that the Producers & Refiners Corporation has developed a very good showing of oil and gas in its No. 1 Rand on the South Frannie structure, south of the Frannie oil field. The well is bottomed at 2747 feet and there is much hope for discovery of another field in this territory, the showings having been so encouraging.

Prairie Gets Good Well In Sundance Formation

Casper. — There was an interesting development in the old Lost Soldier field in Carbon County, Wyoming, this week when the Prairie Oil & Gas Company got an 1100-barrel oil well at its No. 74A, in the Sundance sand. There have been in all only five wells drilled to the Sundance in this field, and the last is the best, proving the potentialities of that horizon to a certain extent. The total depth is 1926 feet and the well is practically in the center of the field.

Old Salt Creek Lease

Casper.—The old Jupiter Oil Company lease on the west side of the Salt Creek field is to be put on production again by the Wallace Evans interests, according to an official report made here. There are two wells shut in on this acreage, and Evans states that he will drill several more tests.

Salvage Line

Casper.—The Illinois Pipe Line Company is taking up its eight-inch pipeline between the Big Muddy field and Casper.

Buyers to Resume Work In Old Shawwol Pool

Moorcroft, Wyoming. — Moorcroft Oil & Refining Company, Portland, Oregon, has taken over the old shallow oil field at Butte, about sixteen miles north of this town, in northeastern Wyoming. There are a half-dozen or more old wells in this field and they will be cleaned out and put on production. About 25 more wells will be drilled. A test to 1500 feet will be started soon.

Routt County

Denver.—Midwest Refining Company announced this week its location of another wildcat well in Routt County, Colorado, on the Chimney Creek structure. The Midwest now has six wildcat wells drilling in Wyoming and Colorado, all of which are of great interest to the operators in this territory.

Utah Test

Ogden.—The Home Oil Company of Ogden, Utah, has taken over the Western Venture Corporation's oil test near Vernal, Utah, on a fifty-fifty basis, and will complete the hole to 2000 feet. The well is now standing at 1275 feet, and there have been several good gas showings reported.

Shale Plant Abandoned

Rulison, Colo.—United States Geological Survey's experimental oil shale plant at this place is being dismantled and abandoned. All of the information concerning shale resources which was wanted by the Survey has been acquired.

Salt Creek Field to Have Interesting Deep Test

Casper.—It has been announced here that the Midwest Refining Company interests will drill a deep test well in the Salt Creek field, Natrona County, to the granite rocks. Location is made on NW 35-40-79, and regardless of what discoveries are made the test will be carried through all of the possible producing horizons to the granite.

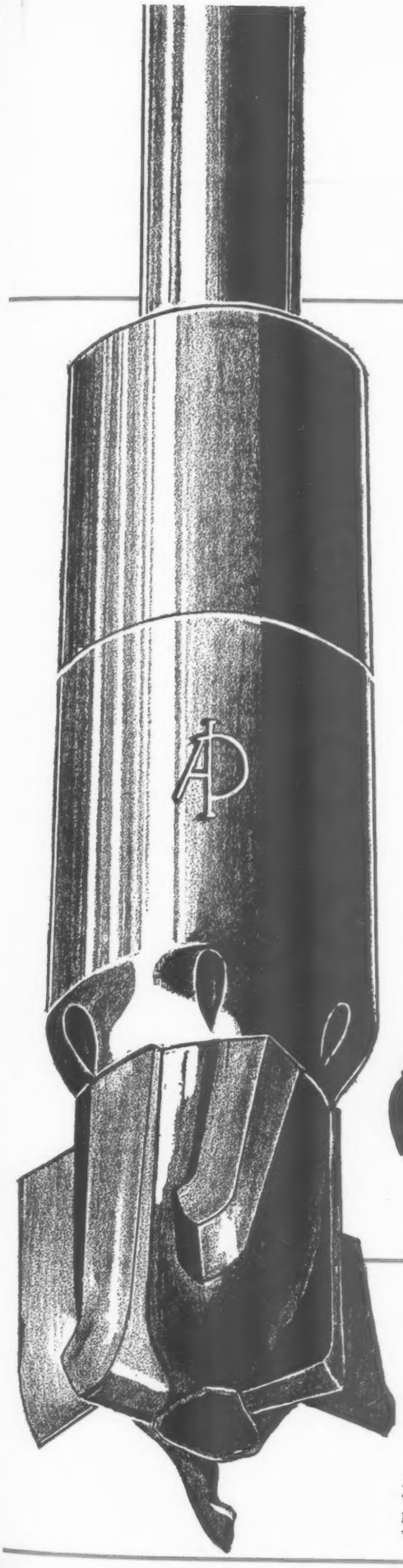
In Salt Creek field seven sands have been found productive—Shannon, First, Second, and Third Wall Creek, Dakota, Lakota and Sundance. Now there will be a test made of the Embar, Tensleep, Amsden, and Madison to the granite. This test will be one of the most interesting explorations ever to be made in the famous Salt Creek field. The well will be, probably, about 6500 feet in depth.

Lawndale

Los Angeles.—Failure of any drilling well in the Lawndale field to make a serious bid for production during the week relegated to area to a still remoter class and all but eliminated it from the future prospects of the State.

Less than a dozen wells remain active, and of tests not more than one seems to stand an even chance for production. The heavy losses are sustained by operators in the district.

XUM



80%

of the major companies use the PERFECTION Core Barrel

YES, more than 80% of the major companies, drilling contractors and independent operators have bought Perfection Core Barrels within the last several months.

They have found that the Perfection's exclusive features such as the Split Liner the way it stays clean until it reaches bottom, regardless of bridges, etc., cannot be duplicated in any other core drill.

It has been proven that our Perfection Core Bit set with diamond substitute will cut more hole in less time than any rock bit at less expense.

Such popularity with those who know must be deserved. Our illustrated catalog will tell you in detail why the Perfection Core Barrel is approved by more than 80% of the major companies of the Mid-Continent field and hundreds of others elsewhere. No obligation. Send for it today.

Ask about other Brewster A. P. I. Products: Shouldered Tool Joints; Drill Collars Fish Tail and Special Gumbo Bits; Special Rock Bits.

The Brewster COMPANY~INC.
SUCCESSORS TO OIL CITY IRON WORKS INC.
Shreveport, Louisiana

Distributors:—Continental Supply Co., All Stores; Wilson Supply Co., Houston and Beaumont, Texas; Hercules Supply Co., Dallas, Texas; T. T. Word Supply Co., Lake Charles, La.; Murray-Brooks Hardware Company, Lake Charles and Hackberry, La. *Exporters:*—Continental Well Supply Company, 74 Trinity Place, New York City, N. Y.

Why California Curtailment Was Not Successful

(*Continued from page* 33)

the approaching day when there will be a natural decline, particularly at Santa Fe Springs.

The present price of crude at wells for Long Beach and Santa Fe Springs production is $1.25, against $1.40 to $1.46 for the same grades in October, 1925, which price also prevailed during 1926, which was a big production year in California. The peak in daily average production over a period of one year was recorded during 1923, when Long Beach, Santa Fe Springs and Huntington Beach were doing their best to break all records. At that time the price paid for 30 gravity oil at the well was 89 cents. During that period the consumption of all petroleum products in California was at a low ebb, compared with present consumption and demand outlook. Thus, it is evident that California operators have some reason to feel optimistic over their immediate outlook and are not inclined to the belief that crude prices will recede. Since Santa Fe Springs represents the most prolific oil area in California at the present time, it is readily seen that any natural decline in production there will have a tendency to strengthen the California crude market. At least, such a circumstance will prevent the possibility of lower crude prices; therefore, all eyes are on Santa Fe Springs to note whether the field is capable of passing the 300,000-barrel mark. The next few weeks should tell the story.

It is understood that refiners can make U. S. Motor gasoline at about 6½ cents at the present price of crude. At that rate, the gasoline manufacturers are netting 9 to 9½ cents at refinery, not taking into consideration the gasoline that is shipped by tanker to points outside of Pacific Coast territory. No gasoline is now being shipped to the Atlantic Seaboard, except on contracts, while spot inquiries are being met with an asking price of 7 to 7½ cents. As the rate for clean tankers to the Atlantic Seaboard is now around 2½ cents a gallon, this price cannot be paid and compete with prices at the Gulf for U. S. Motor. However, the larger companies with their own tankers, are able to ship gasoline to the Atlantic Seaboard for about 1½ cents a gallon, netting themselves about 8 cents at the refinery in California. Thus, competition is possible and profitable to these larger companies. Regardless of whether there is competition or not, it is a foregone conclusion that California refineries, regardless of how small they are, will wind up this year with a nice profit. Naturally, the fuel oil market is still in bad shape, as it has been for a year or more, but most of the fuel oil sold is under annual contract, and represents most of the production for this year. These contracts were made at around 60 to 75 cents, while spot movement commands a price of 60 to 65 cents.

Retail gasoline prices are being marked up by the Standard Oil Company of California, as was evidenced by the announcement last week which in effect raised the wholesale price in the West Coast territory, with the exception of Arizona. For some three weeks resellers have been allowed a 5-cent differential. In Los Angeles, the retail price was 19½ cents, against a contract or delivered price of 14½ cents, allowing the dealer a profit of five cents. Now, with the increase in wholesale prices, the dealer's profit has been reduced to four cents. No one seems to be worried over the quantity of gasoline in storage in California. At the close of May, gasoline stocks aggregated 14,108,752 barrels, against a peak in March, 1928, of 14,779,259 barrels. Gasoline consumption in the Pacific Coast territory has shown a gain of 10 per cent. during the past few years and shipments have more than doubled in the last five years.

Light crude stocks totaled 30,455,516 barrels at the end of May, compared with 43,564,186 barrels in March, 1928. The latter figure was an all-time peak. This indicates that there is no lack of steel storage. There has been no need of building major pipe lines for the past two years, while the most ambitious steel storage building program of the year has been that of the General Petroleum Corporation, at the company's new refinery at Torrance. Roughly, there is probably steel storage capacity in the state at this time fully five million barrels more than there was two years ago. Shipments of petroleum products out of California, particularly to the East Coast, are not expected to show any increase during the next few months. This is partly due to the fact that some of the large East Coast companies have decided not to permit a flood of California oil into that territory. These East Coast refiners like California crude and are not adverse to running it, but they have a large supply of crude available now from other sources. Besides, any increase in shipments of California oil to the East Coast would have a weakening effect upon the general market.

The new law in California governing waste of natural gas is now in effect, but the machinery for enforcement has not been fully worked out. This new law will serve as a policeman, in that producers will be obliged to exercise more care in conserving gas which has heretofore gone to waste. This is expected to have a material effect upon the production of crude oil in flush areas of the state. This, coupled with the possibility of Santa Fe Springs reaching its peak within the next few weeks, is creating a rather optimistic feeling among California operators. When that happens, there will not be any menacing field on the horizon to furnish flush production; the Kettleman Hills situation will be handled in a satisfactory manner and the outlook for the entire state will, once again, begin to reflect prosperity for the industry in California, as well as the industry throughout the United States.

Considerable Interest Is Shown in Safety Contest

Tulsa.—Considerable interest is being displayed in the Greater Seminole Safety Contest, sponsored by the safety division of the Mid-Continent Oil and Gas Association. Inquiries regarding the contest have been received from all parts of the United States and from India, Russia and Rumania.

Among those companies participating in the Greater Seminole Safety Contest are Carter Oil Company, Sinclair Oil & Gas Company, Mid-Continent Petroleum Corporation, Cosden Pipe Line Company, Shell Petroleum Corporation, Barnsdall Oil Company, Empire Oil & Refining Company, Tidal Oil Company, Skelly Oil Company, Phillips Petroleum Company, Gypsy Oil Company, Amerada Petroleum Corporation, Continental Oil Company, Oklahoma Natural Gas Corporation, Gulf Pipe Line Company, Independent Oil & Gas Company, Cities Service Pipe Line Company, Superior Oil Corporation, Mid-Kansas Oil & Gas Company, Atlantic Oil Producing Company, Shooters Torpedo Company, Oklahoma Pipe Line Company, Indian Territory Illuminating Oil Company, Prairie Oil & Gas Company, Divisions 1, 2, 3, and 4, Shaffer Oil & Refining Company, and Sinclair Pipe Line Company.

Importance of Deep Well In Rincon Over-rated

Ventura, Calif.—Recent discovery of a deep oil sand in the Rincon field is not expected to stimulate drilling at this time, and it now appears that the importance of the 125-barrel completion was unintentionally over-rated. Development of a sand at such a great depth hardly seems logical, in view of the present overproduction and the fact that the oil was only 22 gravity. The discovery well—Richfield Oil Company's Hobson-Fee 1—was completed at 7450 feet and is producing from about 165 feet of sand and shale.

Project May Have Effect On Beach Permit Activity

Santa Barbara, Calif.—Development of beach permits in the Elwood field is regarded as a probable means of increasing production from the area and may be the step which will lead to extensive ocean permit drilling. Pacific Western Oil Company has completed a pier on Permit 92, a strip which directly offsets one of the best leases in the field. Union Oil Company has followed suit and will drill a well on its Spaulding permit. Drilling beach permits has been the subject of much discussion, but such development is thougth to be legal where the permits were issued under the state leasing law.

XUM

Deep Sands Throw New Light on Barbers Hill

(*Continued from page 38*)

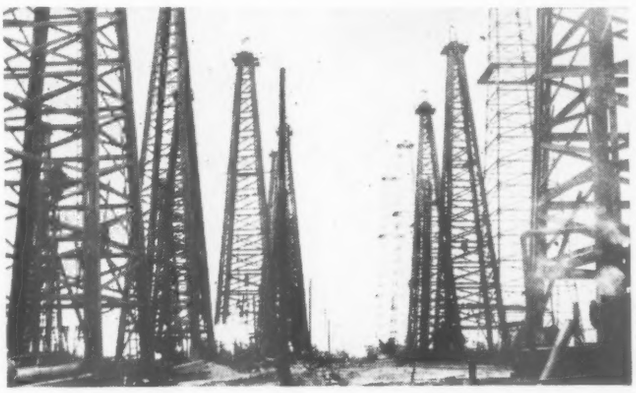
000 barrels before it was two months old. It is still a good flowing well, with over 400,000 barrels to its credit. Since that well came in, three additional producers have been completed along that flank of the dome and several others are down to or nearing the pay sand.

Prior to the recent discovery of the prolific Oligocene sands, nearly all of the production at Barbers Hill was from Miocene sands along the southwest and south flanks of the dome; although some production was opened in 1926 on the northwest and east flanks.

It was on the south flank that the first production of Barbers Hill was obtained, and on the southwest flank that the first commercial producer was completed in 1918; and then for a period of nearly eight years the southwest-south flank remained the only productive area in the field. With the exception of Mills Bennett's Barrow 5, which produced from the Oligocene at 4551 feet, all of the wells of that area were completed in Miocene sands ranging in depth from 1800 to 4500 feet. Those Miocene sands have produced a total of nearly a million barrels through the completion of approximately 40 producers; but only about half a dozen of those wells are now producing, all being on the pump, with a combined yield of about 60 barrels daily.

The first productive area that was opened at Barbers Hill outside of the southwest-south side was the northwest flank. The discovery well of that section was A. E. Barber 1, a joint test of Mills Bennett and Humphreys Corporation. It was completed May 14, 1926, for 500 barrels at 2245 feet. A total of six producers is the record for that area, but only three of the six are now producing, with a combined output of 20 to 25 barrels daily. Production of the northwest flank is from either the upper Miocene or the basal Pliocene.

Six months after they had found the new pay on the northwest flank, Mills Bennett and Humphreys Corporation opened production on a third flank of the Barbers Hill dome, completing Kirby B-2 on the north end of the east flank for 300 barrels at 4118 feet. It was brought in on November 7, 1926, but was subsequently deepened, and on February 16, 1927, came in for 700 barrels at 4174 feet. Two other producers were subsequently completed in the same sand, which is in the Miocene, and all three of those Miocene wells are still producing, with a combined yield of about 170 barrels daily. Mills Bennett Production Company's Smith 1, the Oligocene discovery well, is only about 750 feet south of the group of three Miocene wells; and so all development of the area following completion of the Mills Bennett well has been directed toward the deeper and more prolific pay.



An avenue in the heart of the deep sand area on the east flank of Barbers Hill

From the earliest operations at Barbers Hill through 1925 around 30 different individuals and companies drilled there, but prior to the recent discovery of the deep sands, the activity of the field was confined for about three years almost entirely to the operations of two companies, Mills Bennett Production Company and Humphreys Corporation. Those two concerns deserve a great amount of credit for the development of Barbers Hill. Mills Bennett, head of the present Mills Bennett Production Company, was largely instrumental in the development of the southwest and south flanks of the dome, beginning operations there as early as 1922; and as pointed out above, Mr. Bennett and Humphreys Corporation together opened production on the northwest and northeast flanks of the dome, while the new Oligocene pay on the east flank was discovered by Mills Bennett in Smith 1, which is directly responsible for the present great amount of production and drilling. The development of that east flank is being carried on in large part now by Mills Bennett and by Humphreys Corporation.

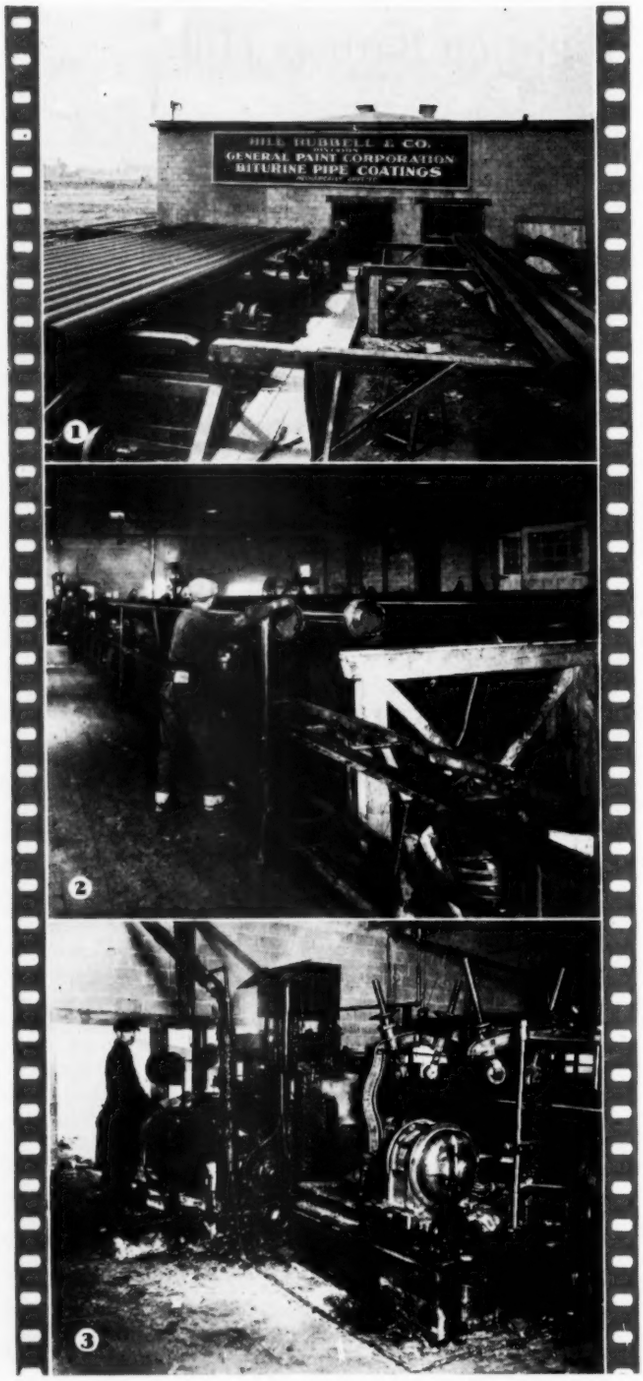
Acreage Control

Humphreys Corporation holds more acreage at Barbers Hill than any other operator, having acquired extensive interests within the past year and a half from Mills Bennett. Of the 32,800 feet along the periphery of the dome, Humphreys Corporation holds 11,600 feet, or more than one-third of the total. Those leases are along the east, north and west flanks of the dome. Up until a year and a half ago Humphreys Corporation held extensive acreage with the Mills Bennett interests on a 50-50 basis, but at that time Humphreys Corporation also acquired the other half interest, with Mills Bennett retaining a one-tenth profit-sharing interest. About the beginning of this year Humphreys Corporation also bought that remaining one-tenth interest, and so all of the acreage formerly held jointly by Humphreys Corporation and Mills Bennett are now held entirely by Humphreys Corporation. Mills Bennett still retains an interest in the Humphreys Corporation leases in the form of royalties. The sole lease which Humphreys Corporation now owns on a joint basis is a 14-acre tract on top of the south side of the dome, held equally with Patillo Higgins, the latter operating it. Incidentally, these interests several weeks ago brought in Annie Higgins 1 on that tract as an isolated producer, 800 feet north and east of any other cap rock production of the south flank. It flowed for two hours at the rate of 700 barrels fluid per day, 25 per cent. oil, having been completed in cap rock at 852 feet, and then began flowing by heads. Later additional water broke in from above, and this well is now being worked over.

Humphreys Corporation, organized by the late Colonel A. E. Humphreys, has always been a pioneering organization, spending its efforts rather in new and undeveloped areas than in settled fields, and the Humphreys interests have to their credit the discovery of six important fields, Big Muddy in Wyoming, Billings and Boynton in Oklahoma, and Mexia, Wortham and Currie in Texas. The company now has production at Richland, Blue Ridge, Pierce Junction and Sour Lake in addition to that at Barbers Hill, and has acreage in various other fields and districts. From the Barbers Hill standpoint, it is interesting to note that this company, which has had remarkable success as a pioneer in the fault zones, has now turned almost altogether to the Gulf Coast region, seeing in it great undeveloped oil reserves, and picking Barbers Hill as a particularly promising dome for further carrying on the company's pioneering policy.

Not All Luck

The principal companies holding acreage and operating now on the south and southwest flanks of Barbers Hill in the new deep sand area are Yount-Lee Oil Company, Mills Bennett Production Company, Gulf Production Company and Sun Oil Company, with the former owning the most extensive interests, its holdings extending around the dome to include various leases on the southern and central parts of the east flank. Like Humphreys Corporation, Yount-Lee Oil Company has established a reputation as a successful pioneer, having been particularly successful in developing deep production from edge sands around the domes of the Gulf Coast. Besides having opened the deep pay on the south flank of Barbers Hill,



MOTION PICTURE OF THE *Greatest Advancement* IN PIPE PROTECTION

Machine Coated and Wrapped Pipe

1 Primed Pipe ready for delivery into coating and wrapping plant.

2 Pipe fitted with temporary couplings, ready for processing through machines.

3 Coating and wrapping machine containing joint of 12″ pipe.

4 Feeding felt wrapper and Kraft paper to pipe, following the application of hot bitumin.

5 Showing portions of applied bitumin followed by wrappings of felt and Kraft.

6 Discharging coated and wrapped joint, showing precision of application.

7 Finished joints ready to load for transportation.

8 One of the six plants now equipped with Hill, Hubbell & Company machines.

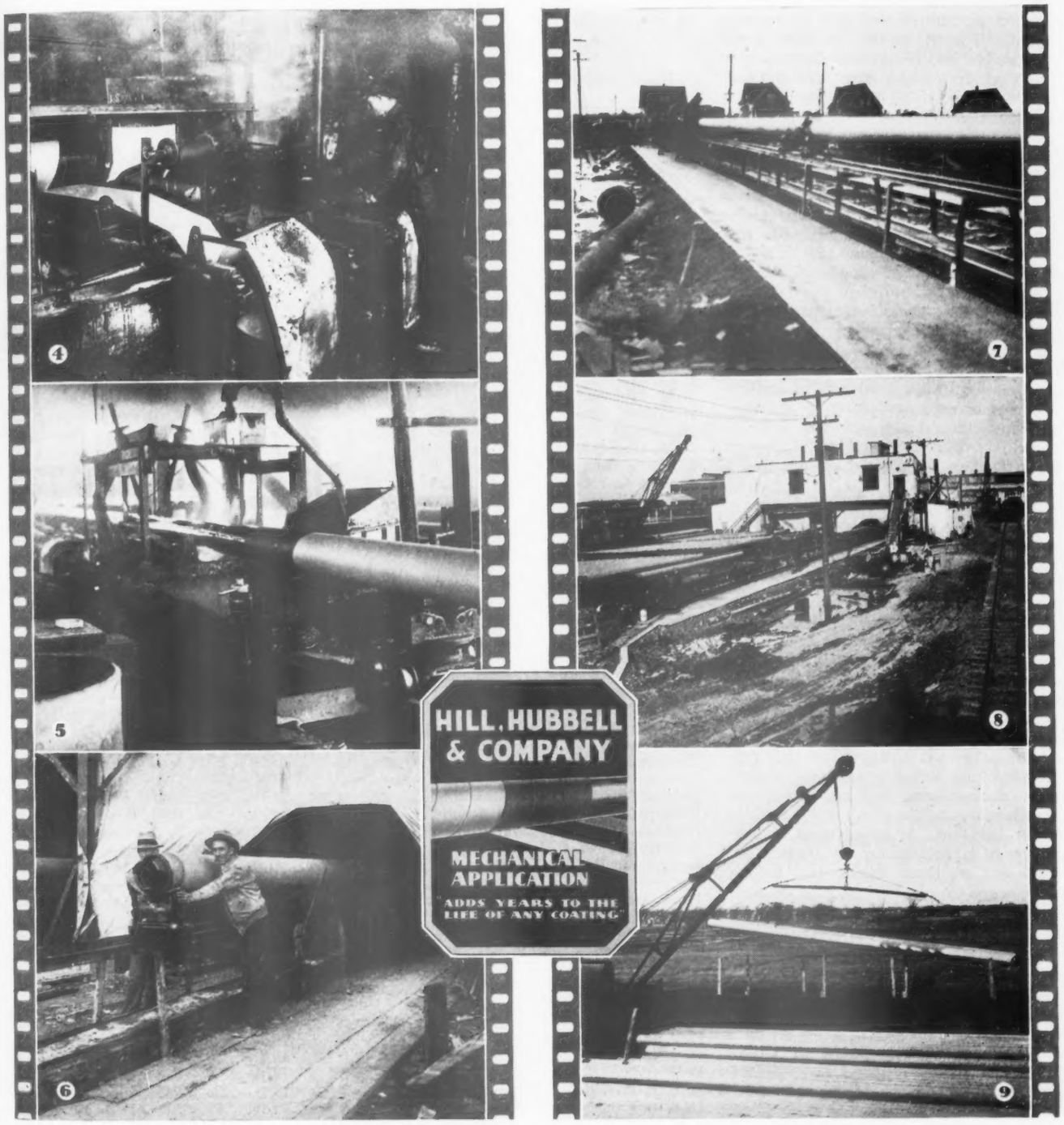
9 Loading coated and wrapped pipe for shipment.

THESE MACHINES AND ALL AUXILIARY EQUIPMENT

HILL, HUBBELL

Division
General Paint Corporation

Offices: SAN FRANCISCO TULSA NEW YORK CHICAGO



FULLY PROTECTED BY UNITED STATES PATENTS

& COMPANY

Manufacturers of Highest Grade Oil Industry Paints and Pipe Line Coatings

General Offices: SAN FRANCISCO

Mid-Continent Factory: TULSA

LOS ANGELES HOUSTON PORTLAND SEATTLE SPOKANE

that company discovered deep sand production at Sour Lake, and rejuvenated Spindle Top by finding the deep sands responsible for the prolific production of the field during the past several years. And on June 3, 1929, Yount-Lee Oil Company further enlarged upon its record as a discoverer of deep sands by completing Houssiere 6 at Jennings or Evangeline, Louisiana, at 7292 feet, opening new flank production there, and incidentally setting a new record for deep production in the Gulf Coast. When Yount-Lee Oil Company entered the Barbers Hill field last year the dome assumed greater importance in the eyes of other Coastal operators, who sub-consciously associated it with the former phenomenal successes of the discoverer of the Spindle Top deep sands. When that company actually found the deep pay on the south side of Barbers Hill, one operator, reflecting the thoughts of many others besides himself, said: "I knew that when that company went in there, Barbers Hill would develop into a real field." The company had lived up to its reputation, and had furnished more material for a growing tradition. As a matter of fact, Yount-Lee Oil Company has duly earned the high regard which it commands. The oft-repeated successes in the deep flank sands of Coastal domes cannot be attributed to luck, but must be recognized as the rewards of experience, keen insight, perseverence, and faith in an early accepted theory that deep flank sands hold an important part if not the cream of the production of salt domes. In opening the new production on the south side of Barbers Hill, Yount-Lee Oil Company has contributed much to the knowledge of the dome, and considering its large holdings on the south and east sides of the field, may be relied upon to contribute in large measure to further development on those flanks, just as the Humphreys Corporation may be counted upon to go ahead with the development of the north and east and northwest flanks.

Pipe Lines

A large part of the Barbers Hill production is being handled by the Liberty Pipe Line Company, which has a six-inch line leading to deep water on Cedar Bayou, a distance of about seven miles; the crude being shipped from that point by barge to the Humble Oil & Refining Company refinery at Baytown on the Houston Ship Channel. The Liberty Pipe Line Company is owned by the Mills Bennett interests. Besides the oil going through that company's line, some is being handled through a line of the Humble Pipe Line Company, and Gulf Pipe Line Company also has a line in the field.

Aside from the increased drilling at Barbers Hill, recent activity there has included the construction of an extensive fresh water system at a cost of approximately $17,000 by Humphreys Corporation. The system was installed in order to obtain an adequate supply of fresh water for drilling and other operations, inasmuch as the waters found in the area are all highly mineralized and salty. Humphreys Corporation laid two and one-half miles of six-inch pipe to Old River,

WELLS DRILLED AT BARBERS HILL
SUMMARY

Period—	Producers	Dry holes	Total tests
Before October, 1928	42	111	153
October, 1928, to now	16	5	21
Total	58	116	174

(The sign (*) under "Initial Production" indicates a dry hole.)

Operator	Tract	Well No.	Date	Init. prod.	Depth	Remarks
Patillo Higgins	Old River	1	1902	*	934	Abn. in cap rock
Patillo Higgins	Winfree, M. C.	1	1902	*	560	Abn. in cap rock
Patillo Higgins	Barber, E. W.	1	1903	*	1176	Abn. in cap rock
Patillo Higgins	Williams, A.	1	1903	*	465	Abn. in salt
Patillo Higgins	Higgins, A	1	1904	*	1052	Abn. in cap rock
G. M. Guffey	Ellen, Mary	1	1904	*	980	Abn. in cap rock
G. M. Guffey	Ellen, Mary	2	1904	*	805	Abn. in cap rock
G. M. Guffey	C. C. Agri. Ass'n.	1	1904	*	1805	Abn. in gumbo
Sun Oil Co.	Williams, A	1	1904	*	1802	Abn. in salt
J. M. Guffey	Fisher, E.	1	1905	*	974	Abn. in cap rock
J. M. Guffey	Wilburn, Z. T.	1	1905	*	1030	Abn in rock
J. M. Guffey	Smith, J. H.	1	1905	*	1457	Abn. in salt
Higgins O. & F. Co.	Higgins Fee	1	1905	*	1104	Abn. in cap rock
Higgins O. & F. Co.	C. C. Agri. Ass'n.	1	1905	*	1490	Abn. in salt
J. M. Guffey	Fisher, E.	2	1906	*	1200	Abn. in cap rock
J. M. Guffey	Wilburn, B. F.	1	1907	*	1100	Abn in gypsum
Jos. Reviere & Co.	Hamilton, J.	1	1908	*	1206	Abn. in cap rock
Home Oil Co.	C. C. Agri. Ass'n.	1	1910	*	1250	Abn. in cap rock
Home Oil Co.	Fisher, A. M.	1	1910	*	2100	Tested salt water
J. M. Guffey	Fitzgerald	1	1911	*	2520	Abn. in gumbo
Community Oil Co.	Monon Trust Co.	1	1912	*	1930	Sulphur water
Gulf-Humble	C. C. Agri. Ass'n.	1	1916	*	2285	Oil show 2200 ft.
Gulf-Humble	C. C. Agri. Ass'n.	2	1916	*	3523	No cap rock
Gulf-Humble	C. C. Agri. Ass'n.	3	1917	40	1571	Sandy shale prod.
Prairie Oil Co.	Wilburn	1	1916	*	2385	Abn. in rock
Anahuac Oil Co.	Hamilton, J.	1	1917	*	410	
Hindman et al	C. C. Agri. Ass'n.	1	1917	*	1380	Abn. in rock, gyp.
United Petroleum Co.	Fisher, E.	1	1918	70	2142	1st com. well; 23 gravity
United Petroleum Co.	Fisher, E.	2	1918	300	1065	18 gravity oil
Benkenstein-W.P. Co.	Richardson	1	1918	65	1600	21 gravity oil
R. L. Autry	Richardson	1	1919	200	1491	19 gravity oil
Benkenstein Synd.	C. C. Agri. Ass'n.	1	1919	270	1860	18 gravity oil
Benkenstein Synd.	C. C. Agri. Ass'n.	2	1919	*	1870	Junked
Benkenstein Synd.	Collier	1	1919	650	1847	18 gravity oil
Benkenstein Synd.	Old River	1	1919	*	1680	Tested salt water
Benkenstein Synd.	Old River	2	1919	*	2100	Tested salt wat'r
Kavanaugh Pet. Co.	C. C. Agri. Ass'n.	1	1919	*	2165	No cap rock
Kavanaugh Pet. Co.	Fisher, E.	1	1919	*	1340	Abn. in gypsum
Kavanaugh Pet. Co.	Fisher, E.	2	1919	*	1960	Tested salt water
Hugh McCollum	Wilburn, B. F.	1	1919	*	1300	Abn. in gypsum
The Texas Company.	Fisher, Ben	1	1919	*	1908	Tested salt water
The Texas Company.	Fisher, Ben	1-A	1919	*	1385	Abn. in gypsum
The Texas Company.	Fisher, Ben	2	1919	200	1918	21 gravity oil
The Texas Company.	Fisher, Ben	3	1919	*	1905	Tested salt water
United Petroleum Co.	Fisher, E.	3	1919	*	1910	Abn. in salt
United Petroleum Co.	Richardson	2	1919	50	1980	21 gravity oil
United Petroleum Co.	Richardson	3	1919	*	2385	Abn. in gypsum
DeWitt Barber	Ellen, M. (Gulf)	1	1920	*	1032	Abn. in cap rock
DeWitt Barber	Ellen, M. (Gulf)	2	1920	50	820	17 gravity oil
DeWitt Barber	Ellen, M. (Gulf)	3	1920	20	810	17 gravity oil
DeWitt Barber	Ellen, M. (Gulf)	4	1920	25	845	Flooded by s.w.
DeWitt Barber	Ellen, M. (Gulf)	5	1920	15	815	17 gravity oil
Gambler Oil Co.	Barber, O.	1	1920	*	1200	
Gulf Coast-Crown	Barber, E. W.	1	1920	*	3721	Abn. in gumbo
Keeble (Trustee)	Fisher, Ben	1	1920	*	350	Abn. in cap rock
Hugh McCollum	Wilburn	2	1920	*	1600	
Old River Oil Co.	Richardson	1	1920	*	1800	Little heavy oil
Old River Oil Co.	Richardson	2	1920	400	2230	27 gravity oil
Spurrier Dev. Co.	Barber, O.	1	1920	*	1231	Abn. in rock
Spurrier Dev. Co.	Wilbourn, B. F.	1	1920	*	883	Abn. in gypsum
Spurrier Dev. Co.	Wilbourn, B. F.	2	1920	*	...	
The Texas Company.	Barrow, E. E.	1	1920	*	3324	Blowout, 3200 ft.
The Texas Company.	Barrow, E. E.	1-A	1920	*	3460	
The Texas Company.	Barrow, F.	1	1920	*	2782	Junked
The Texas Company.	Barrow, F.	2	1920	*	678	Junked
The Texas Company.	Fisher, Ben	3-A	1920	*	1332	
The Texas Company.	Old River	1	1920	*	3941	Abn. in gumbo
United Pet. Co.	Fisher 10-ac.	1	1920	*	2653	Tested salt water
United Pet. Co.	Richardson	4	1920	700	1960	21 gravity oil
United Pet. Co.	Richardson	5	1920	*	1750	Abn. in salt
Gulf Coast-Crown	Fisher, E.	1	1921	*	2500	Salt 1813-2500 ft.
Gulf Coast-Crown	Fisher, E.	2	1921	*	2265	Junked in rock
United Pet. Co.	Richardson	6	1921	*	2070	Abn. in cap rock
Mills Bennett	Barrow, E. E.	1	1921	800	3560	1st edge sand well; 34 grav.

Mills Bennett	C. C. Agri. Ass'n.	1	1922	*	4147	Tested salt water
Mills Bennett	C. C. Agri. Ass'n.	2	1922	*	2685	Abn. in salt
Mills Bennett	Japhet	1	1922	1800	3236	34 gravity oil
Mills Bennett	Japhet	2	1922	1700	3760	
Mills Bennett	Japhet	3	1922	800	3503	27 gravity oil
Dunnman Oil Co.	Fisher, Z.	1	1922	*	2625	Abn. in salt
Hindman et al	Japhet	1	1922	*	2858	Junked
Kirby Pet. Co.	Richardson	1-A	1922	*	2405	
Kirby Pet. Co.	Richardson	1-B	1922	*	2645	Junked
Kirby Pet. Co.	Winfree	1	1922	*	4074	Abn. in sandy shale
Texas Co.-W.P. Co.	Barrow, F.	1	1922	*	4000	Tested salt water
United Pet. Co.	Richardson	7	1922	*	3030	Abn in cap rock
United Pet. Co.	Richardson	8	1922	400	2238	
Mills Bennett	Barrow, E. E.	1	1923	*	3488	Tested salt water
Mills Bennett	Barrow, E. E.	2	1923	1000	3817	40 gravity oil
Mills Bennett	Barrow, E. E.	3	1923	*	3460	Tested salt water
Mills Bennett	Japhet	5	1923	2000	2695	31 gravity oil
Coastal Oil Fields Inc.	Barrow, F.	1	1923	*	60	
Coastal Oil Fields Inc.	C. C. Agri. Ass'n.	1	1923	*	1700	
Coastal Oil Fields Inc.	Fisher fee	1	1923	*	2200	
Coastal Oil Fields Inc.	Fisher, E.	1	1923	*	2715	
Coastal Oil Fields Inc.	Richardson	1	1923	300	2225	20 gravity oil
Coastal Oil Fields Inc.	Richardson	2	1923	*	2385	Tested salt water
Hindman et al	Collier	1	1923	*	1398	Abn., anhydrite
Hindman et al	Collier	2	1923	*	951	Abn. in cap rock
Hindman et al	Fisher, E. H.	1	1923	*	1302	Abn. in cap rock
Hindman et al	Shearer	1	1923	*	907	Cap rock, gyp, 728-907 ft.
Hindman et al	Smith	1	1923	*	889	Cap rock, gyp, 541-889 ft.
Hindman et al	Wilburn	1	1923	*	1130	Abn. in cap rock
Hindman et al	Wilburn	2	1923	*	1280	Abn. in cap rock
Humble O. & R. Co.	Blaffer	1	1923	850	3115	34 gravity oil
Humble O. & R. Co.	Blaffer	2	1923	*	2914	Tested salt water
Humble O. & R. Co.	Meyers	1	1923	85	3606	33 gravity oil
Republic Prod. Co.	Fisher, E.	1	1923	*	3095	Tested salt water
The Texas Co.	Scott	1	1923	*	4635	Abn. hard shale
The Texas Co.	Sheffield	1	1923	*	1128	Abn. in cap rock
The Texas Co.	Sheffield	2	1923	*	2237	Abn in hard sand
Union Sulphur Co.	DeWitt Barber	1	1923	*	1400	Abn. salt; top. cap 930 ft.
Union Sulphur Co.	Winfree, E.	1	1923	*	1410	Abn. salt; top cap 1275 ft.
Union Sulphur Co.	Winfree, M. C.	1	1923	*	682	Abn. salt; top cap 495 ft.
Union Sulphur Co.	Winfree, O. K.	1	1923	*	1192	Top cap 950 ft.
Union Sulphur Co.	Winfree, O. K.	2	1923	*	552	Abn. in cap rock
Mills Bennett	Japhet	4	3/ 4/26	*	4070	Abn. in salt
Mills Bennett	Japhet	6	1926	*	...	
Mills Bennett	Japhet	7	4/24/26	*	2950	Lime rock
Mills Bennett	Barrow, E. E.	3	4/12/26	200	3070	
Mills Bennett	Barrow, E. E.	4	6/19/26	400	3212	
Bennett-Humphreys	Barber, A. E.	1	5/14/26	500	2245	Discov. well of nw flank
Bennett-Humphreys	Barber, A. E.	2	8/ 1/26	*	3488	Junked hole
Bennett-Humphreys	Barber, A. E.	3	8/15/26	150	2230	
Bennett-Humphreys	Barber, A. E.	4	9/22/26	*	2459	Cap rock
Bennett-Humphreys	Barber, A. E.	5	12/19/26	*	3215	Salt water
Bennett-Humphreys	Kirby Pet. Co.	1-A	3/10/26	*	1582	Cap rock
Bennett-Humphreys	Kirby	2-A	8/ 7/26	*	3137	Salt water
Bennett-Humphreys	Kirby	3-A	9/23/26	530	2205	
Bennett-Humphreys	Kirby	4-A	10/12/26	*	2546	Dry
Bennett-Humphreys	Kirby	5-A	2/ 1/27	100	2251	
Bennett-Humphreys	Kirby	1-B	8/23/26	*	1788	Cap rock
Bennett-Humphreys	Kirby	2-B	11/ 7/26	300	4118	Discov. well of ne side; later dd. 700 bbls at 4174 ft.
Bennett-Humphreys	Kirby	3-B	1/19/27	800	4425	
Barcley & Meadows	Barber, E. W.	1	1926	150	2204	Sand
Barcley & Meadows	Barber, E. W.	2	1926	150	2239	Sand
Barcley & Meadows	Barber, E. W.	3	1926	*	2000	
Bennett-Moody Corp.	Barrow, E. E.	5	3/17/27	800	4551	Oligocene; previously 100 bbls at 3470 ft.
Bennett-Moody Corp.	Barrow, E. E.	6	1/25/27	*	5055	Unsuccessful test 3349 ft.
Bennett-Moody Corp.	Barrow, E. E.	7	5/13/27	300	3900	
Bennett-Moody Corp.	Barrow, E. E.	8	8/ 8/27	200	3356	Later (2/8/28) abn in cap rock at 4686 ft.
Bennett-Moody Corp.	Barrow, E. E.	9	10/ 6/27	600	3213	Later plugged back to 3198 ft for 350 bbls (4/22/28)

(*Continued on page* 120)

and from that stream obtains water which requires no treating, and which has no deleterious effect on boilers. The water is pumped with electrically-driven Union Tool and Gaso pumps. It is pumped into a 40,000-barrel reservoir and distributed from there through a four-inch distributing system.

Location

For a complete picture of Barbers Hill, something more concerning the early development is pertinent. Barbers Hill is situated in the extreme northwestern part of Chambers County, 25 miles northeast of Houston. It is about mid-way between Goose Creek and South Liberty, and is within a radius of 20 miles from six salt domes. The town of Mont Belview is located on top of the dome.

Inflammable gas was found at Barbers Hill in a shallow water well as early as 1889, and following the discovery of oil at Spindle Top in 1901, the area was one of the first prospects to be considered as a possible salt dome and oil field, due to its high elevation like Spindle Top, and sulphur water, gas and paraffine dirt. Patillo Higgins, who had entered the oil business at Spindle Top, and who, as mentioned above, is still actively interested at Barbers Hill, drilled the first five tests of the dome, four hitting cap rock and one going into salt, but none finding commercial production, although each showed a little oil in the cap rock. Up until 1916 a total of 21 tests were drilled at Barbers Hill without obtaining production. All but two of them were less than 2000 feet deep, and located for the most part on top of the dome. In 1916 Gulf Production Company jointly with the Humble Oil & Refining Company, drilled three wells on the southern flank of the field on the Chambers County Agricultural Association land, in the area which was recently opened for deep production by Yount-Lee Oil Company. Their third test obtained the first production at Barbers Hill, estimated at 40 barrels per day, at 1571 feet, the crude being from sandy shale, and viscous and heavy. That well soon afterward began making salt water and was abandoned. The first commercial producer was the United Petroleum Company's (Sam Hindman et al) Fisher 1, completed September 14, 1918, for 70 barrels daily of 23 gravity oil. In 1919 there was considerable activity in the south-southwest part of the field, and the daily production for a couple of months was around 1000 barrels. Activity continued through 1920, but 1921 was a year of little drilling. Late in December, 1921, Mills Bennett completed a well started by the United Petroleum Company—E. E. Barrow 1 on the southeast flank at 3560 feet for 1000 barrels of 35 gravity crude. That was the first well to secure oil from edge sands around the dome, and was the best producer that had been completed up to that time.

Following completion of that well by United Petroleum Company there was considerable drilling in the area, the wells completed including Mills Bennett's Japhet 1, which came in in October, 1922, for 1800 barrels 35 gravity oil at 3236 feet. That well was a consistent producer for

several years, and retained a record as the best well completed at Barbers Hill up to the discovery of the Oligocene sand on the east flank by Mills Bennett Production Company in October, 1928. In 1923 the principal activity was the drilling of three tests by The Texas Company on the northeast flank of the dome. Sheffield 1 and 2 were abandoned in cap rock, and Scott 1 was abandoned at 4635 feet without having had any important showings. In 1925 the field was inactive; but in 1926, as pointed out above, Mills Bennett and Humphreys Corporation opened production on the northwest and the east flanks of the dome. During the latter part of 1926 and in 1927 and the first part of 1928 those new flanks were further developed, while activity also continued on the south-southwest flank. In October, 1928, as previously mentioned, Mills Bennett Production Company completed Smith 1, opening prolific Oligocene production, and furnishing an incentive for the drilling that has brought about the present relatively great production.

Deepest Test

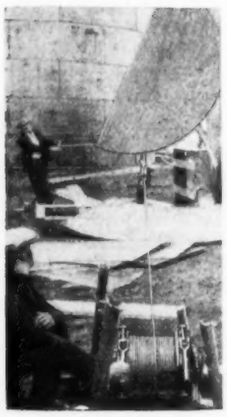
Tulsa.—Indian Territory Illuminating Oil Company's Cook 1, NW¼ Section 10-1n-11e, wildcat test near Coalgate in western Coal County, is drilling ahead in shale at 7500 feet. This is the deepest test for oil ever made in Oklahoma.

(Continued from page 119)

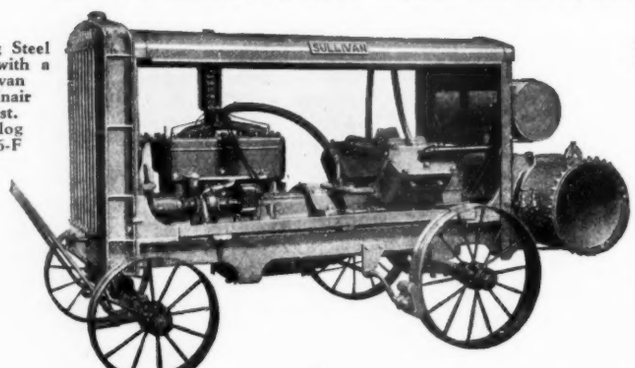
Bennett-Moody Corp.	Japhet	8	5/ 7/27	*	3007	Cap rock
Humphreys Corp.	Kirby	4-B	6/27/27	100	4150	
Humphreys Corp.	Kirby	5-B	10/27/27	*	4949	Sandy shale
Humphreys Corp.	Kirby	6-A	12/13/27	*	2397	Water sand
M. Bennett Prod. Co.	Kirby 15 ac	1	11/20/27	1500	5468	
Sam Hindman	Fisher	1	12/ 1/27	*	4600	
Humble O. & R. Co.	Meyers fee	4	11/20/27	100	3050	
Humble O. & R. Co.	Meyers fee	5	1928	100	3000	
Mont Belview Oil Co.	Williams, M.	1	5/ 1/28	*	4556	
Humphreys Corp.	Barber, E. W.	1	5/ 6/28	*	1151	Cap rock 1147-51 ft.
Humphreys Corp.	Barber, E. W.	2	8/17/28	*	1358	Cap rock
Humphreys Corp.	Barber, E. W.	3	12/16/28	*	2606	Cap rock
M. Bennett Prod. Co.	Smith 4-ac	1	10/ 9/28	4000	5272	Oligocene discovery well on e. side; s n. 5231-72 ft.
M. Bennett Prod. Co.	Smith 4-ac	2	5/ 2/29	1400	5197	Sand, 5140-74 ft.
M. Bennett Prod. Co.	Kirby 15 ac	2	4/ 8/29	380	5397	26 gravity oil
Yount-Lee Oil Co.	Richardson	1	12/20/28	10	2075	
M. Bennett-Republic	Means, J. B.	1	4/ 6/29	1850	5255	Top sn. 5210; 27 gravity
Humphreys Corp.	Kirby	6-B	4/27/29	*	5809	
Humphreys Corp.	Kirby	1-C	1/ 3/29	2500	5231	
Humphreys Corp.	Barber, Corn.	1	3/ 5/29	2300	5194	26.5 gravity; T. sn. 5167 ft.
Rexal Pet. Co.	Shaw	1	3/16/29	650	2095	
Joe Bashara	Tarbutton	1	4/22/29	750	5236	26 gravity oil
Yount-Lee Oil Co.	Richardson	2	1/25/29	30	2080	
Yount-Lee Oil Co.	Richardson	3	2/23/29	*	2217	Cap rock
Yount-Lee Oil Co.	Richardson	4	3/30/29	*	2279	
Yount-Lee Oil Co.	C. C. Agri. Ass'n.	1	1/29/29	4700	5318	Oligocene discovery well on s. side; 30.5 gravity
Yount-Lee Oil Co.	C. C. Agri. Ass'n.	2	3/27/29	1125	5329	Top s'nd 5168 ft
Yount-Lee Oil Co.	C. C. Agri. Ass'n.	3	4/ 8/29	1200	5329	Set 160 ft screen
Gulf Prod. Co.	Fisher fee	1	5/18/29	1000	5590	Set 6 jts screen
Humphreys Corp.	Kirby	7-A	5/ 4/29	*	3464	Salt, 3259-64 ft
Talbert & Markle	Ilfrey	1	5/18/29	1700	5190	
M. Bennett Prod. Co.	Hamman	1	6/ 1/29	1500	5195	
Unice Oil Company	Feldman-Gulf	1	6/10/29	400	5231	

United Gas Company Speeds Production

with Sullivan Air Power



Erecting Steel Tanks with a Sullivan Turbinair Hoist. Catalog 4176-F



Cutting a trench in rock, with a Sullivan Rotato. Catalog 4181-T

Sullivan "Vibrationless" Compressor. Catalog 4183-F

Breaking Concrete with Sullivan Buster. Catalog 4181-V

SULLIVAN "Vibrationless" Portable Compressors like that shown above, are at work for the United Gas Company, in the vicinity of Beaumont and Port Arthur, Texas.

These compressors, designed to run without vibration, give the gas or oil enterprise portable air power as dependable as that furnished by the best stationary compressors.

Capacities are 110, 160, 220, 310 cu. ft., with Buda engines, and any type mountings. *Catalog 4183-F.*

Sullivan Rock Drills, Concrete Breakers, Clay Spreaders and Portable Hoists also will help speed up your construction. *Catalogs on request.*

SULLIVAN

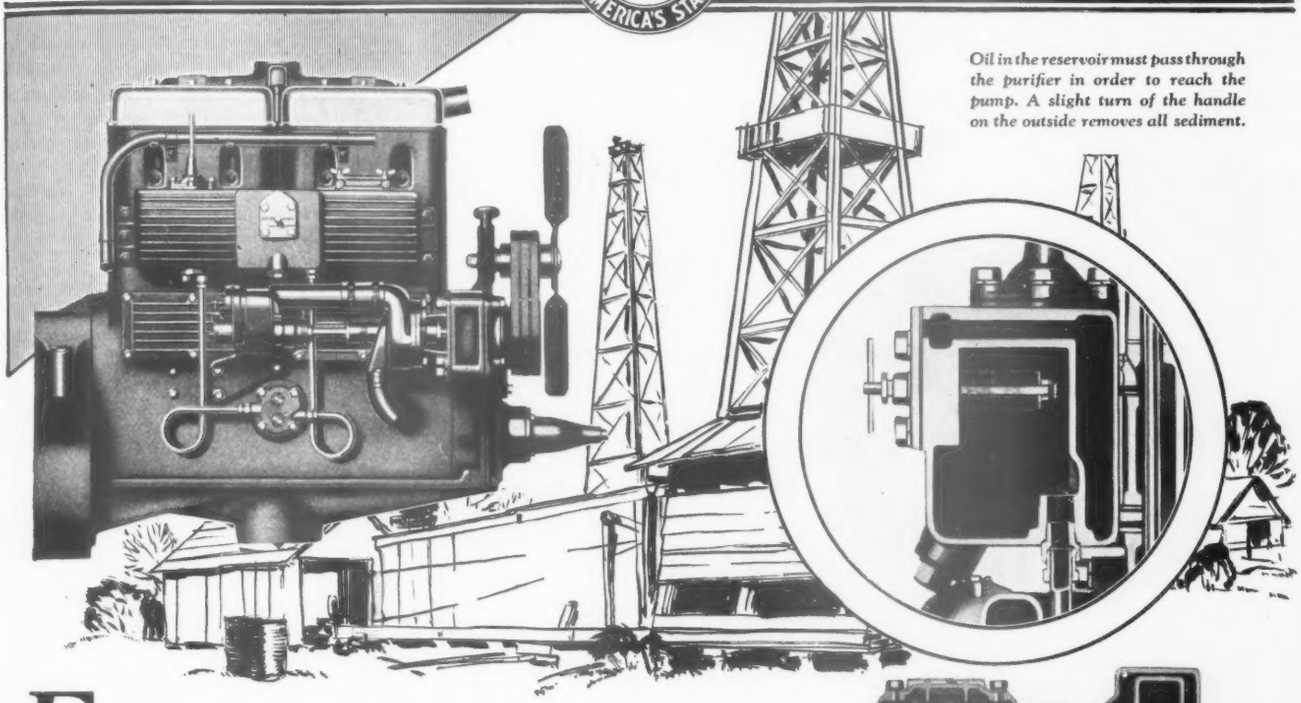
SULLIVAN MACHINERY COMPANY

713 Wrigley Building, Chicago

Sullivan Spaders in a narrow trench. Catalog 4181-N

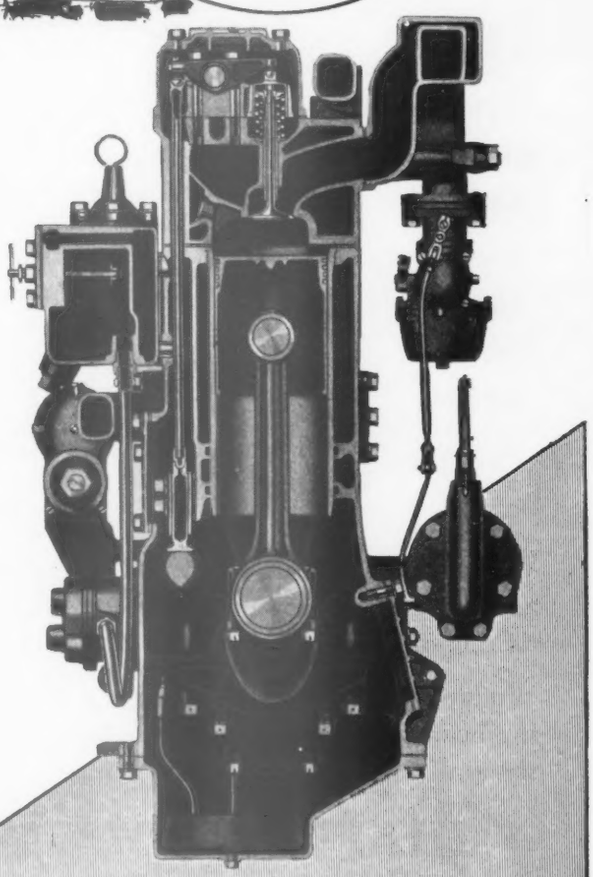
Dependable Power for Every Purpose

CONTINENTAL MOTORS — Powerful as the Nation — AMERICA'S STANDARD



Oil in the reservoir must pass through the purifier in order to reach the pump. A slight turn of the handle on the outside removes all sediment.

Flexibility for Oil Field Operations



One of the greatest factors in the use of gasoline power in oil field developments is its flexibility—the advantage of being able to move this power quickly and easily. The use of Heavy Duty Continental Engines gives not alone this much desired flexibility but in addition a dependability of operation upon which the operator can rely—absolutely. And such certainty of performance makes for greater profits on production wherever oil fields are located.

CONTINENTAL MOTORS CORPORATION
INDUSTRIAL EQUIPMENT DIVISION
Office and Factory: Muskegon, Michigan

The Largest Exclusive Motor Manufacturer in the World

Continental Engines

Oil Men Largely Responsible for Extensive Air Travel in South America

(Continued from page 42)

the air displaced by his wings and minimizing bumpiness.

During that leg of the flight, we again experienced the thrilling sensation of speed, as we were clipping along at nearly 100 miles an hour and the trees which overhung the banks of the river seemed to flash past with lightning-like rapidity. We marvelled at the steadiness of the plane, as for mile after mile we sped along at a very slight but never-varying distance above the water, seemingly with no effort on the part of the pilot, who sat at ease with his hands resting lightly upon the controls.

In passing Barranca Bermeja, we caught a glimpse of the Tropical Oil Company's camp, refinery, and tank-farm, but we were not to stop there until the return journey, as we were more concerned with the matter of the new Colombian petroleum bill and the deliberations of the Interantional Advisory Commission then sitting in Bogota.

A Hot Spot

Earlier in the morning, we had stopped for gasoline at El Banco, which stands out in our memory as the hottest spot found in all our tropical travels. We remained there only 20 minutes; but suppose we had had to spend 20 days at the hot, broiling level of the river? Fortunately, we soon returned to a cooler altitude and again were on our way, with every feeling of comfort, security, and well-being.

The lulling drone of the powerful motor was too much for us, after having been awakened in the wee small hours of the morning, and, one after another, our heavy lids dropped in sleep. At one time, three of the passengers were sound asleep.

We stopped at Puerto Berrio for lunch and gasoline, and about mid-afternoon our fuel supply was replenished a third time at La Dorado, the head of navigation on the lower river. At that stage of our journey, had we been travelling by less modern means of conveyance, we should have had to disembark from the river steamer on which we would by then have spent six to eight days during the rainy season or 15 or 20 days during the dry season, and transfer to a train for the journey overland around the rapids to Beltran.

Our impression of the day's flight was of flying into the angle of a gigantic geographical V, as at the beginning of the journey, the outspread wings of the Central and Eastern Cordilleras were dimly visible in the distance, the central range on the right and the eastern range on the left. As we flew southward, these spreading ranges seemed to converge; and, in fact, did so, as between Honda and Girardot we flew between the walls of a deep Andian gorge at the bottom of which flowed the upper river, a very much narrower and more turbid stream than in the broad valley near the coast.

Thus, we accomplished in about eight hours, including time out for lunch and re-fueling, a journey of some 600 miles which might otherwise have taken from eight days to one month. It was with genuine regret that we left the plane at Girardot to continue on our way by slower means of travel, as we left behind us that first thrill of flight, never again to be recaptured.

On going ashore at Girardot, the river-port for Bogota, the capitol, we were weighed again in a methodical check against the weights recorded in the morning at Baranquilla.

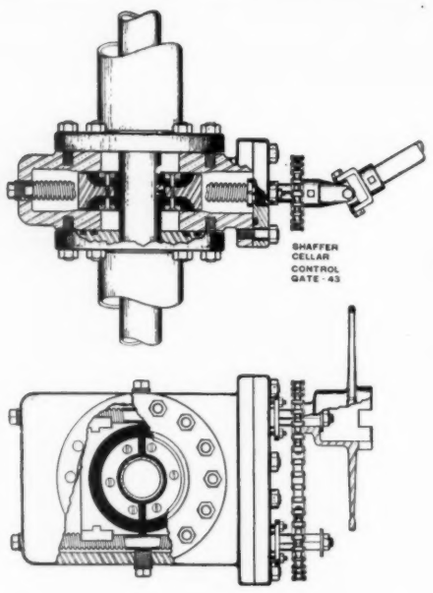
Hotel accomodations at Girardot being even more notoriously poor than those to which the traveller must become accoustomed in South America, we boarded a train there and proceeded to Apulo, a ride of about two hours, where we spent the night in a new and comfortable hostelry.

Next morning, we again boarded one of the trains of the *Ferro-caril de Girardot;* and, in a matter of a few hours, rose to an altitude which afforded a distinct change of temperature. Wearing only light woolen clothing, we began to shiver at a height of five or six thousand feet, and by the time we reached the capitol, which has an altitude of 8563 feet, we felt a real need for overcoats and winter clothing. There, still another new experience awaited us, as, having successfully escaped seasickness and air-sickness, we succumbed to *soroche,* that dreaded mountain-sickness which often affects the newcomer in Andian heights.

Bring On Your

HIGH PRESSURES

Gives Full Protection Whether There Is Pipe In The Hole Or Not.



THE SHAFFER CELLAR CONTROL GATE

We have staked out our claim in the oil industry — our zone of endeavor is the control of high pressures during drilling or production.

We have pioneered in the design and manufacture of casing heads, cellar fittings, control gates and flow beans for the high pressure fields of the world.

SHAFFER TOOL WORKS

Specialists In High Pressure and Safety-First Oil Field Equipment

BREA CALIFORNIA

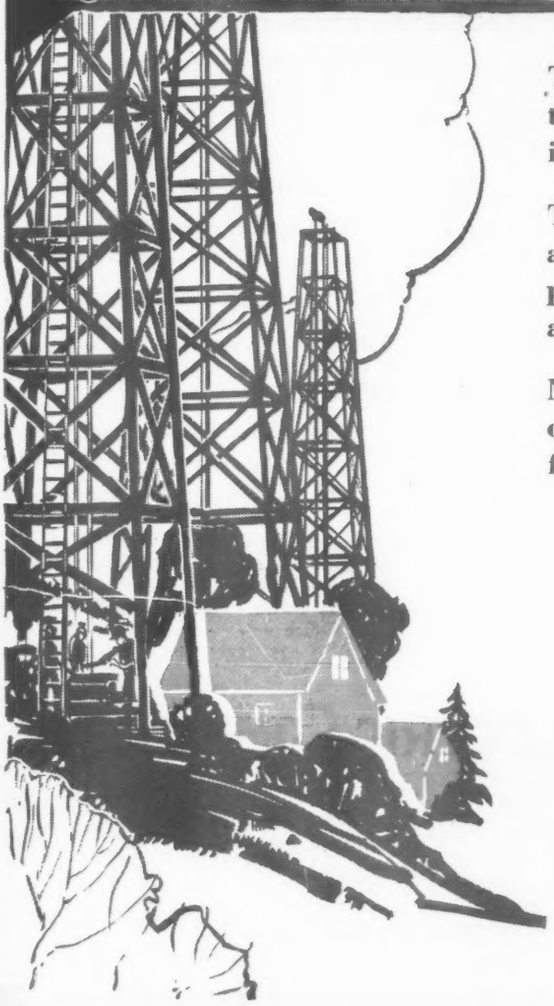
DISTRIBUTORS

Robt. N. Atmore Co., Tulsa, Okla. Robt. J. Miller Co., Houston, Texas

Foreign Representative: Oil Well Supply Company

Pittsburgh, Pa., U. S. A.; London, England; New York, U. S. A.; Tampico, Mexico

Like a giant's grip on your pipe



That's the way *Genuine Williams'* "*Vulcan*" *Tongs* take hold, and that's why they've been the favorite in the oil fields everywhere for the last thirty years.

The jaws are fastened with extra large through-bolt and U. S. Standard nut. The chains are individually proof-tested and CERTIFIED. All "Vulcan" Tongs are drop-forged and fully guaranteed.

Nine sizes for ⅛″ to 18″ pipe. Either flat link or cable chain. There's one for your job. Use No. 15½ for 16″ pipe. Write for literature.

J. H. WILLIAMS & CO.
"The Wrench People"
New York BUFFALO Chicago

GENUINE WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"VULCAN"
CHAIN PIPE TONGS

ELECTRIC Beam well Pumping *increases* – Production

Many reports from major operators prove that ELECTRIC POWER increases production at least 10% in beam pumping as well as showing a saving on repair expense and maintenance on equipment.

Popularity of beam well pumping by electricity is growing. Approximately 15% of Seminole's wells now on the beam are pumped by ELECTRIC POWER and over 400 wells in other fields in the state are pumped by electricity.

For beam well pumping the type of motor is usually a 2-speed double rated motor. For areas where the depth is around 2000 feet, a 15/30 H.P. Motor is customary—at greater depth, a 20/50 H.P. or a 25/65 H.P. is customary.

Notice the names of our branch Commercial Department officers. Without obligation, you are urged to talk things over with our nearest representative.

Commercial Department:
Oklahoma City
O. A. Jennings, Mgr.

Oklahoma City Office - F. P. Hays
Ardmore Office - - - J. G. Cronin
Muskogee Office - - W. H. Steuve
Sapulpa Office - - - James Tussey
Enid Office - - - V. H. Kershner

OKLAHOMA GAS AND ELECTRIC COMPANY

J. F. Owens, Vice President and General Manager

Courteous, Personal Attention to Every Customer

One of a series of advertisements showing what ELECTRIC POWER has done.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
BREA-OLINDA—		
Shell Oil Co., Orange 18	200	5275
KERN FRONT—		
Chanslor-Canfield Midway Oil Co., Midway 25	160	2210
Midway 3	300	3300
Standard Oil Co., No. 224, 1-32-23..	150	2655
LAWNDALE—		
Richfield Oil Co., Intercity 1	*	5550
General Pet. Corp., Johnson 1	*	7020
Petroleum Securities Co., Brown 1..	*	6450
LONG BEACH—		
E. E. Coombs, Hope 1	100	7185
Delaney Pet. Corp., Stevens 1	350	6670
Richfield Oil Co., Bernstein 2-A	2800	7555
Cal-Mex Oil Co., No. 22	800	5375
Rotary Oil Co., Jumbo 1	100	5425
The Texas Co., Harlow-Kent 11	50	7480
Richfield Oil Co., Freeman 5	100	5940
MT. POSO—		
General Pet. Corp., Glide 26, 21-27-28	300	1630
SANTA FE SPRINGS		
Associated Oil Co., Jordan 2	10,000	6850
George F. Getty, Inc., S. F. 35	50	6850
Italo Pet. Corp., Archer 2	2000	6925
SEAL BEACH—		
Associated Oil Co., Hellman 3	550	5475
Standard Oil Co., San Gabriel 22	500	5313
San Gabriel 20	1200	5575
VENTURA—		
Associated Oil Co., Hartman 17	650	7071
Shell Oil Co., Taylor 2	350	7150

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
South Penn Oil Co., Bingham 533, tr 109	7	....
Bingham 533, tr 110	7	....
Lot 14, tr A-2	2	....
Hooker 30	2	....
Bingham 423, tr 21	2	....
Bingham 452, tr 4	4	....
Bingham 406, tr 34	pressure	....
Dent 124	2	....
Dent 125	3	....
Burdick 07	pressure	....
Lee-Hallock & Co., 106	2	....
Bingham-Satterfield 153	2	....
Culbertson lots 81	2	....
H. E. Smith 186	2	....
H. E. Smith 120	pressure	....
Wallace & Co 1	2	....
Bingham 6	4	....
Melvin 286	2	....
Melvin 287	2	....
Melvin 288	2	....
Whipple 27	2	....
Whipple 28	2	....
Whipple 29	2	....
Enterprise 1	pressure	....
Enterprise 2	2	....
Cotton 8	2	....
Jones 1	2	....
Hazlewood Oil Co., Lot 23, tr 153..	2	....
Lot 23, tr 142	2	....
Lot 23, tr 149	2	....
Lot 23, tr 159	2	....
Lot 23, tr 175	2	....
Bingham 61	4	....
Bingham 186, tr 06	pressure	....
Mix Creek Oil Co., Mix Creek 58..	2	....
Mix Creek 59	2	....
Mix Creek 60, 61, 62, 63, 64..	pressure	....
Sunny Oil Co., Sunny 3	4	....
Sunny 4	4	....
Healey Pet. Co., Stimson 66	2	....
Stimson 67	3	....
Stimson 68	2	....
D. T. Andrus & Co., Bingham 20	5	....
Bingham 21	4	....
Simpson & Co., Bingham 386, tr 66..	2	....
Bingham 386, tr 67	3	....
Bingham 386, tr 68	2	....
Hope Oil Co., Hope 4	3	....
Hope 5	3	....
H. E. Camp Est., Bingham 1	20	....
Bingham 2	pressure	....
L. G. Dana, Dana 7	7	....
McKean County Trust Co., Griffith 41	12	....

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Prod. This Week	Initial Prod. Last Week
Arkansas	9	7	3	2	1	1	5	4	980	175
California	23	25	20	24	..	..	3	1	20,710	53,400
Illinois	8	2	6	2	..	..	2	..	486	260
Indiana	10	1	2	1	1	..	7	..	35	45
Kansas	10	16	4	10	1	2	5	4	280	6,630
Kentucky	17	19	13	13	1	1	3	5	502	527
Louisiana	18	14	6	4	6	1	6	9	318	1,377
Michigan	14	10	12	9	1	..	1	1	6,510	2,218
New York	6	10	6	10	..	..	..	..	15	56
Ohio	39	45	17	10	10	26	12	9	402	398
Oklahoma	26	57	18	26	1	8	7	23	6,527	11,613
Pennsylvania	90	96	88	86	1	6	1	4	320	318
Texas	146	152	87	85	7	5	52	62	57,150	48,059
West Virginia	11	12	5	..	4	10	2	2	67	...
Total	427	466	287	282	34	60	106	124	94,302	125,076
Increase this week	..	..	5	..	..	..	..	..	...	...
Decrease this week	39	..	..	..	26	..	18	..	30,774	...

Company, Well and Location	Initial Production Bbls.	Depth
W. C. Kennedy, Kennedy 11	5	....
Wright & Saph, Bingham 394, tr 15	4	....
Associated Producers Co., Bingham 580, tr 10	4	....
N. V. V. Franchot, Loop Est. 1..	pressure	....
Campbell 19	7	....
J. W. Kaufman, Rounds 29	15	....
H. F. Jack & Co., Jack 18	5	....
Grow Farm Oil Co., Grow 1	4	....
G. A. Simpson, Simpson 8	4	....
Simpson 9	4	....
Simpson 10	4	....
Simpson 11	4	....
Simpson 12	4	....
V. G. Smith, Smith 1	8	....
Roy E. Diament, Diament 11	4	....
Emanuel Daly, Burns & Co. 4	3	....
Curtis & Co., Burns 2	3	....
T. H. Kervin & Co., Kapp 13	4	....
Dennis & Co., Dennis 6	3	....
A. Stover, Duke 14	4	....
Penn Petroleum Co., Duke 9	4	....
L. F. Kinley & Co., Mantz 6	4	....
A. H. Wiborg, Meldrum 7	4	....
Dunlavey & Curtis, Curtis & Co. 5	4	....
VENANGO COUNTY—		
C. R. Bunny & Co., Drake 9	2	....
Oil City Nat. Bank Co., Foster 20..	2	....
Pierce & Wright, Cumming 12	2	....
Brundred Oil Corp., Lot 82, tr 77..	2	....
Lot 82, tr 78	2	....
C. L. Irwin, McKee 1	2	....
National Pet. Co., Rytle 41	2	....
BUTLER COUNTY—		
Schenck & Watson, Brown 7	¶1	....
Badger & Co., Reitz 1	2	....
Blair & Stewart, Blair & Co. 8	2	....
M. Dunlap, Magee 1	*	....
CENTER-MIDDLE FIELD—		
R. L. Thomas, Dennis 3	2	....
Zook & Sloan, Lot 420, tr 54	2	....
J. B. Bright Estate, Irvine 1	2	....
Anderson & Wilson, Willams 1	2	....
H. Anderson, Baure 1	2	....
CLARION COUNTY—		
Harkenrider & Co., Harkenrider 2..	2	....
F. L. Mong, Best 2	2	....
Citizens Trust Co., Whitehill 14	2	....
F. C. Diemer, Meherton 8	2	....
GREENE COUNTY—		
Covert Bros., Whipkey 1	20	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGANY COUNTY—		
Phillips & Minderler, Warters 3	2	....
McDivitt & Co., McDivitt 8	3	....
J. A. Bucher, Bucher 2	2	....
Karl-Weller Oil Corp., Karl 4	3	....
Galletts-Stephens Co., Volkl 3	2	....
Beckwith Bros., Cass 2	3	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
MARSHALL COUNTY—		
Guy Patterson, Reese 1	¶¼	....
Woodruff O&G Co., Ernest 2	*	....
Manufacturers Light & Heat Co., Meighan 2	*	....
GILMER COUNTY—		
South Penn Oil Co., Amos 7	25	....
CALHOUN COUNTY—		
Godfrey L. Cabot, Rafferty 8	15	....
Calhoun Oil & Gas Co. 1	20	....
ROANE COUNTY—		
Virginian Gasoline & Oil Co., Boggs 8	5	....
WIRT COUNTY—		
George B. Vance, Gibson 44	2	....
MONONGALIA COUNTY—		
Carnegie Nat. Gas Co., Stephen 2..	¶¼	2965
DODDRIDGE COUNTY—		
Starkley Oil Co., Flanagan 1	¶¼	....
MARION COUNTY—		
Owens Bottle Machine Co., Wilson 1	¶¼	2434

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
DAVIESS COUNTY—		
Huff & Calderwood, McCandless 3..	75	....
Creek Drilling Co., Powers 1	70	....
Johnson & Young, Howard 2	20	....
Leeper Oil Co., Burnett 7	10	....
Eastern Gulf Oil Co., National Bank Co. 1	7	....
Thrasher & Brewer, Crow 1	*	....
Young, Goldburg & Co., Purcell 3..	*	....
OHIO COUNTY—		
Snowden-McSweeney Co., Duke Hrs. 5	80	....
Duke Heirs 7	20	....
Duke Heirs 6	10	....
Snowden-McSweeney Co., Duke Hrs. 7	20	....
Ohio Oil Co., Kirk 5	50	....
Kirk 6	50	....
Wood Oil Co., Inc., Funk 1	80	....
Cumberland Pet. Co., Hamilton 18..	15	....
J. Leonard Daniel, Hoover 1	¶2	....
CALDWELL COUNTY—		
Missouri-Kansas Pipe Line Co., McNeeley 1	15	640
ALLEN COUNTY—		
E. D. Defenbaugh, Beam 4	*	330

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MONROE COUNTY—		
Sylvania Oil & Gas Co., Givens 9..	3	1980
Penn O&G Co., Knuckel 2	¶1	1782
C. J. Denbow, Neise 8	*	....
NOBLE COUTY—		
Local Oil Co., Egler 20	*	1100
Mallett 8	*	1100
Blake & Addis, Schwallie 2	3	1200
MORGAN COUNTY—		
Farm Oil Co., Robberma 2	¶1	940
Henning Bros., Kennard 21	¶½	1638
Kemrow Co., Dawson 1	¶½	681
WASHINGTON COUNTY—		
Parson-Sweeney Oil Co., Mendenhall 3	*	....
Meister & Blair, Blair & Co. 5	5	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
ASHLAND COUNTY—		
Logan Gas Co., Sharrick 2	¶1½	....
Crile 2	*	....
Finley 2	*	....
Coast & Co., Barnhart 4	2	....
Harmon & George, McFarland 1	*	....
B. Slagel, Ullman 1	*	....
COSHOCTON COUNTY—		
Preston Oil Co., Wilson 2	102	3593
Leonard Oil & Gas Co., Norris 4	5	....

Company, Well and Location	Initial Production Bbls.	Depth
MEDINA COUNTY—		
Ohio Fuel Gas Co., Towslee 2	*	....
Ray Jones & Co., Funk 1	20	....
MEIGS COUNTY—		
Tyree & Co., Carnahan 9	5	611
R. C. Miller & Co., Cross 3	10	592
LICKING COUNTY—		
Sterl Brown, Frost 3	¶½-5	676
Heisey Gas Co., Davis Heirs 2	¶¼	1350
ATHENS COUNTY—		
Logan Gas Co., McLaughlin 1	¶¼	1659
Chas. Fox & Co., Bean 1	¶¼	1431
SUMMITT COUNTY—		
East Ohio Gas Co., Mason 1	¶¼	....
F. A. Brendall & Co., Dreese 1	*	....
MUSKINGUM COUNTY—		
Pure Oil Co., Crawford 11	155	2956
PERRY COUNTY—		
Ohio Fuel Gas Co., Combs 1	55	3546
GUERNSEY COUNTY—		
George Jewell & Co., Spaid 1	34	3383
COLUMBIA COUNTY—		
George Keil, Brooks 12	2	....
KNOX COUNTY—		
Ohio Fuel Gas Co., Long 4	¶1¼	....
LORAIN COUNTY—		
Logan Gas Co., Malik 2	*	....
BELMONT COUNTY—		
C. D. Crouch & Co., Davidson 1	*	2020
HOCKING COUNTY—		
Tucker & Co., Burgess 1	50	3032
NORTHWESTERN OHIO		
HANCOCK COUNTY—		
Robert Mitchell, Trustee, 3	40	1286
SENECA COUNTY—		
Columbus-Tiffin Oil Co., Ropp 3	8	1230
INDIANA		
MARION COUNTY—		
Oklando Gas & Oil Co., Oklando 1	*	946
MONROE COUNTY—		
Saddle Creek Oil Co., Fox 1	*	1625
PERRY COUNTY—		
Packard Oil Co., Devillez 1	*	1034
SPENCER COUNTY—		
Packard Oil Co., Ray 1	15	450
Ellis & Young, Bretz 1	*	1060
STARKE COUNTY—		
Tawa Oil Co., Lewis 1	*	1495
WARRICK COUNTY—		
E. M. Treat & Co., Walters 1	*	1178
PIKE COUNTY—		
Chas. C. Taliaferro, Jr., George 1	¶2	1124
SULLIVAN COUNTY—		
Charles W. Scott, Scott 3	20	2200
DAVIESS COUNTY—		
L. L. Gee & Co., 2 Gaither, 2	*	1357
ILLINOIS		
ST. CLAIR COUNTY—		
Ohio Oil Co., Hall-Weihl 1	66	546
Dyroff 3	45	540
St. Clair County Oil Co., Hamilton 1	220	555
Morris & Yeager, Mansette 2	90	559
WABASH COUNTY—		
Ridge Farm Oil & Gas Co., Price 8	10	1574
Haven & Co., Wright 1	*	1590
LAWRENCE COUNTY—		
Ohio Oil Co., Clark 14	55	1308
CLAY COUNTY—		
Orville McGuiggan, Unknown 1	*	....
MICHIGAN		
MUSKEGON COUNTY—		
Johnson O&R Co., Thompson 2	500	2058
Thompson 3	450	2056
Thompson 5	1500	2058
Reed Oil Co., Young 2	500	2060
Eagle Oil Corp., Doctor 1	750	2021
Maire-Caswell-Kidder, Shuler 2	240	2072
East Ohio Gas Co., Malone 2	600	2031
Muskegon Oil Corp., Daniloff 3	200	2023
Royal Oil Co., Young 1	200	....
Harvey-Bolema Oil Synd., Gretzner 1	*	2300
Swastika Oil & Gas Co., Gilbert B-3	520	2043
MIDLAND COUNTY—		
Sias O&G Co., Kneeland 1	750	3559
Pure Oil Co., Converse 1	*	....
ISABELLE COUNTY—		
Sias O&G Co., Keller-McClintic 1	300	3563
NEWYAGO COUNTY—		
Melrose O&G Co., Woodward-Hatch 1	¶8	3100
OKLAHOMA		
CARTER COUNTY—		
Magnolia, Gill 3, nw se se, 23-1s-3w	15	3427
Gypsy, Morris 2, csl nw sw, 28-2s-3w	*	2323
CREEK COUNTY—		
George F. Collins et al, Halsell 2, ne sw sw 12-17-11e	20	1201
Magnolia, Messelman 21, se sw se, 8-18-7e	20	2654
GARVIN COUNTY—		
Gilcrease-Douglas, Barnett 1, se nw ne, 36-3n-3w	*	4697
JEFFERSON COUNTY—		
Church & Brown, School 1, se ne nw, 16-5s-8w	*	3001
KIOWA COUNTY—		
Alexander et al, Fuqua 3, se sw sw ne, 18-6n-16w	*	601
OKFUSKEE COUNTY—		
Independent, Jacobs 2, nw sw ne, 22-12-11e	*	2902
OKMULGEE COUNTY—		
Rounsaville, Tunley 3, cel nw se, 30-12-12e	25	1939
L. C. Wheeler et al, Finerty 1, se, 31-16-12e	¶14	2195
OSAGE COUNTY—		
Harland, 83, ne se sw, 21-25-11e	35	1731
Phillips 2, sw ne nw nw, 28-25-12e	12	1699
F. R. Billingslea, 2, cel nw, 6-23-9e	10	2161
Braden & Moore 15, ne sw sw ne, 12-21-8e	15	608
PAWNEE COUNTY—		
Hay et al, Copeland 2, ne sw sw, 26-20-9e	530	2054
PAYNE COUNTY—		
The Texas, Cullison 1, ne nw, 5-17-5e	50	3616
POTTAWATOMIE COUNTY—		
Panther, Townlot 3, se sw sw, 14-7-4e	*	35
Slick & Amerada, Walker 1, ne se, 19-4e	4000	3682
Houston, Wyatt 1, ne nw sw, 17-7-4e	1410	4233
Amerada, Richardson 1, ne sw, 16-7-4e	50	3770
SEMINOLE COUNTY—		
McCullough, Coody 1, se sw se, 18-9-7e (owdd)	*	4384
STEPHENS COUNTY—		
American Pipe Line Co., Dexter 6, se nw, 34-1s-8w	75	1858
Wirt Franklin, Drake "B" 2, sw nw ne, 12-1s-4w	60	3187
Ven-Mex-Mid Continent, Medley 2, ne nw nw ne, 2-2s-8w	80	2219
Pace et al, Bristowe "A" 3, nw sw, 18-2s-7w	50	1426
Pace et al, McMasters 4, ne se nw ne, 13-2s-8w	70	1463
KANSAS		
BUTLER COUNTY—		
Empire, Cranston 8, nw ne se, 22-27-5e	150	2769
Marshall "C" 1, ne sw sw, 11-27-5e	*	2784
COFFEE COUNTY—		
Cross et al, Drapes 1, nw ne, 17-23-14e	*	1755
COWLEY COUNTY—		
Edinfield et al, Wycoffe 1, c sw se, 8-34-3e	abandoned, lcn	
Blankenship & Washoma, Hedrick 1, se sw ne, 16-32-4e	*	3314
GREENWOOD COUNTY—		
White, Graham 8, csl se nw, 35-25-10e	70	1998
Shell, Pees 1, ne nw, 22-222-12e	10	1722
Empire, Halderman 1, se sw, 15-22-12e	50	1732
Independent, Race 3, ne nw se, 19-23-10e	*	2315
LYON COUNTY—		
State and Spencer, Milner 1, sw, 33-21-11e	*	2055
MORRIS COUNTY—		
General Ut., Midcalf 1, sw se ne, 15-16-7e	¶½	492
ARKANSAS		
OUACHITA COUNTY—		
Phillips Pet. Co., Scott 1, 34-15-15	200	1990
UNION COUNTY—		
Lion O. R. Co., Rowland 5, 15-17-14	*	2700
Stowe 1, 4-17-14	*	3313
Magna Prod. Co., El Dorado Realty Co. 2-B, 8-17-13	*	3084
Ohio Oil Co., L. S. Adams 2, 12-17-14	¶5	3016
Pure Oil Co., M. H. Nash 2, 7-17-13	768	3040
Simmons et al, T. Green 1, 3-16-16	†	2601
Sam Slark, Tr., Murphy 5, 9-16-15	†	1986
Magna Prod. Co., Murphy 1, 15-16-15	12	2070
NORTH LOUISIANA		
BOSSIER PARISH—		
Palmer Corp., Whitehurst 5, 35-16-12	*	875
Triangle Drilling Co., J. H. Fullilove 1, 11-17-12	¶4	1717
CADDO PARISH—		
Shreveport Oil Corp., Muslow 3, 32-21-15	8	1650
Standard Oil Co. of La., Hunter Est. 2, 8-19-14	70	2418
FRANKLIN PARISH—		
Ruston Drilling Co., West Va. Lbr. Co. 1, 23-16-7e	*	3500
OUACHITA PARISH—		
Magnolia Pet. Co., U. S. Govt. 2, 30-19-5e	¶800,000	2412
LA SALLE PARISH—		
Gardner et al, Harper 11, 26-10-1e	75	1508
RICHLAND PARISH—		
Southern Carbon Co., Tagola 1, 4-15-6e	¶46	2473
Magnolia Pet. Co., M. L. McCoy 2, 29-16-6e	¶5	2401
C. M. Noble 2, 36-16-6e	¶32	2438
Northern La. Nat. Gas Co., Boykin 1, 20-17-6e	¶70	2350
SABINE PARISH—		
Ark. Fuel Oil Co., Logan 13, 32-10-12	10	3300

BUY OR RENT USED PIPE

and Save the Difference

15,000′—5-3/16″ Casing	50,000′—2″ Line Pipe
10,000′—6⅝″ Casing	50,000′—3″ Line Pipe
5,000′—8¼″ Casing	20,000′—4″ Line Pipe
10,000′—10″ Casing	15,000′—6″ Line Pipe
2,000′—12½″ Casing	5,000′—8″ Line Pipe
2,000′—15½″ Casing	

We will rent this casing or any other pipe which you may need. Let us finance your operations by carrying your pipe and casing investment for you.

BRANCH STORES
Wichita Falls, Holliday, Vernon, Breckenridge, Pampa, Texas

EASTERN HEADQUARTERS
Butler, Penna.

Keystone Pipe & Supply Co.

HOLMES BUILDING
FORT WORTH, TEXAS

SPECIALIZATION

IN CUTTING OUT WELLS MEANS SAVINGS TO THE OIL INDUSTRY

J.S. ABERCROMBIE
INSIDE CUTTING TOOL

ABERCROMBIE

RED BALL SERVICE

Long Distance 200—Fairfax 5317

Concentration upon one particular service to the Oil Industry, will, in a short time develop that service to its highest point of efficiency. Thus it is with the Abercrombie method of cutting out wells. Years of specialization on cutting out wells, with a tool of our own design, has developed our service to a point, where it is no longer an experiment, or test on any well regardless of the conditions encountered. It is a proven method whereby a definite saving of time, footage, equipment and money is made on every job undertaken. This fact is definitely established by the hundreds of jobs we have already done for many of the leading companies.

In order that we may serve you speedily and economically we maintain a corps of 12 skilled operators —all practical drillers. These men are ready, to depart on a moment's notice with full equipment and tools to perform cutting services for you.

Please specify inside diameter of casing when requesting our services.

J. S. ABERCROMBIE Co.
616-18 West Bldg. Houston, Texas

SOUTH LOUISIANA

BAYOU BLUE DOME—
Standard of La., Wilbert 2 ..... * 3620
LOREAUVILLE—
Gulf, State Z-9 ..... * 900
EDGERLY—
Wilson-Broach, Wilson 3, dd..... 85 3040
SORRENTO—
Gulf, United Lands Co. 14 ..... * 4075

TEXAS

TEXAS GULF COAST

BARBERS HILL—
Yount-Lee Oil Co., Chambers County Agr. Assn. 6 .....1680 5002
Sun Oil Co., Chambers Co. Agr. Assn. 2 .....2200 5400
Chambers Co. Agr. Assn. 1..... 250 5700
Unice Oil Co., Feldman 1 ..... 300 5221
Mills Bennett Prod. Co., E. W. Barber 1 ..... * 6262
CLAY CREEK—
Sun Oil Co., Schirmer 2..... * 3635
BIG HILL (Jefferson County)—
The Texas Co., Pipkin 1 ..... ¶20 5958
BATSON—
Acorn Oil Co., Paraffine 70 ..... 50 1135
BLUE RIDGE—
Moody Corp., West-Schenck 6, dd.. 20 3990
FANNETT—
Gulf, Bordages A-7 .....1000 5658
Thomas 12 ..... * 1350
HUMBLE—
The Texas Co., Landslide 264..... 600 4160
REFUGIO—
Sun Oil Co., Rea 1 ..... 40 3669
Korona Oil Co., Reilly 1 ..... 25 3600
RACCOON BEND—
Sarah Helmuth 1 ..... 500 3548
SUGARLAND—
Humble, Hamner Fee 2 .....1000 3670

SOUTHWEST TEXAS

SALT FLAT—
Gulf, Carter 13 ..... 150 2687
Northcut 7 .....1700 2691
W. L. Smith 7 ..... * 2828
T. C. Hadley, Merriweather 2 ..... 30 2743
Humble, F. Gray 2-A 725 2677
F. Gray 2-C 400 2678
Addie Hinds 3-A 500 2694
Moses & Baggett 8-B 300 2667
Moses & Baggett 9-B 300 2708
J. L. Northcut 3-A 600 2688
J. L. Northcut 1-B 100 2701
J. L. Northcut 2-B 725 2696
Clyant Smith 2-B 600 2681
J. R. Tiller 2-C 580 2696
Lutex Oil Co., Thos. Wilson 5..... 1 2
Suttel et al, Malone 2 ..... 100 2650

EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
PANOLA COUNTY—		
Adams & Waller, Adams 5, Cord F-16	¶8	2726
BOGGY CREEK—		
Humble, Neches River 1	*	3784

TEXAS PANHANDLE

CARSON COUNTY—
Marland Prod. Co., Burnett 1-L.... ¶80 3180
GRAY COUNTY—
B. S. Arnold et al, J. E. Mangold 1.. ¶37 2690
The Shamrock Co. et al, W. S. Clayton 3 .....1000 2846
The Texas Co., A. Chapman 2..... 60 2902
Washoma Pet. Co. & Danciger, R. E. Smith 2 ..... 60 3237
WHEELER COUNTY—
Magnolia Pet. Co., T. E. Trostle 1 ¶45 1810

NORTH TEXAS

ARCHER COUNTY—
Archer Drlg. Co., Thompson 3 .... * 1645
Brown & United Prod. Co., Taylor 2 30 1641
Taylor 3 ..... 215 1485
Lester Burns et al, McCrory 1-M.. 35 1250
T. P. Coleman et al, Longley 1 .... * 1350
Continental Oil Co., Richardson 4-B 65 1169
F. P. Cullum et al, Falls County Fee 2 ..... 40 1128
Fain-McGaha Oil Corp., Taylor 3-A.. 215 1483
Taylor 1-B ..... * 1666
Gwynn-Boyd Drlg. Co., Thompson 3 200 1592
Humble O&R Co., Kunkel 3 ..... 215 1185
Humble & Fain-McGaha, Logan 8-B 35 1118
T. F. Hunter et al, Bishop 1..... * 1505
Kemrow Prod. Co., Campbell 5.... * 1825
J. H. Massie et al, Wilson 7 ..... 15 1593
Geo. L. Pace et al, Riggs 1 ..... * 2004
Petroleum Prod. Co. et al, Kunkel 3-B 350 1184
F. Payne et al, Parrish 4-A 25 1404
Prairie, Richardson 3, Lot No. 13.. 115 1168
Prairie & Moran Drlg. Co., Richardson 1 ..... * 1161
Shappell Oil Co., Lyles 6 ..... 45 1701
C. P. Sheldon et al, Chilson 2 ..... 8 1780
W. H. Smith, Jr., et al, Prideaux 4.. 10 745
CLAY COUNTY—
American Ref. Properties, Fee 4.... 5 934
Mid-Continent Holding Corp., Stine 1-B ..... * 1840
COOKE COUNTY—
Kewanee O&G Co., Hair 1 ..... * 1668
ELECTRA—
W. H. Hammon et al, McCarty 14-C 25 1370
GRAYSON COUNTY—
McGregor & Jones, Coleman-Peters 1 † 245
Texas-State Oil Co., Guilloud 1 ... * 976
HASKELL COUNTY—
Barnes et al, Pierson 1 ..... * 1552
Superior Oil Prod. Co., Reynolds 5 * 1740
JACK COUNTY—
Buttram Pet. Corp., Cullers-Sporer 3 20 2024
F-H-E Oil Co., Leffel-Box 1..... 70 3188
Leffel-Box 2 ..... 825 3085
Lydecker et al, Leffel-Box 1 ..... * 3390
Bert J. Shaw et al, Leffel-Box 1.... 80 3201
The Texas Co., Dougherty 1 ..... 85 3069
K-M-A AND IOWA PARK—
Comac Oil Co. & Prairie, Bishop 1-B * 1905
W. H. Hammon et al, Mitchell 9 .. 35 1818
King Royalty Co., Donehoo 17.... * 566
E. J. Stump & Heydrick, Ferguson 3 * 1796
THROCKMORTON COUNTY—
J. A. Bearman et al, Ledbetter 2.. 10 784
Tuton 1 ..... 10 779
WILBARGER COUNTY—
C. P. Burton et al, Waggoner 3-I.. 30 1884
Empire G&F Co., Waggoner 5-A... 190 1832
Waggoner 6-C 135 1896
Fain-McGaha, Waggoner 5-W 200 2413
Grayback Dev. Co., Waggoner-Boggy 1 ..... 225 1872
Melat Oil Co., Waggoner 7-A 15 2000
John O'Neil et al, Waggoner 1 .... * 1904
Peckham et al, Waggoner 1-A 450 1876
Phillips Pet. Co., Waggoner 3-S 60 2388
Waggoner 3-U 45 1878
Prairie O&G Co., Waggoner 11-A.. * 2436
Bert Shaw et al, Waggoner 1-G.... 70 1876
Staley-Wynne & Co., Waggoner 1-N * 1898
The Texas Co., Waggoner 363 .... * 575
Wilbarger Oil Co., Waggoner 3-A.. 20 1957
YOUNG COUNTY—
Clarida & Bratcher, Johnson 1..... * 730
Schermerhorn Oil Co., Thompson 5 5 2084
Shinola Oil Co., Haygood 2 ..... * 730
Wise & Jackson, Colvin 9..... 5 637

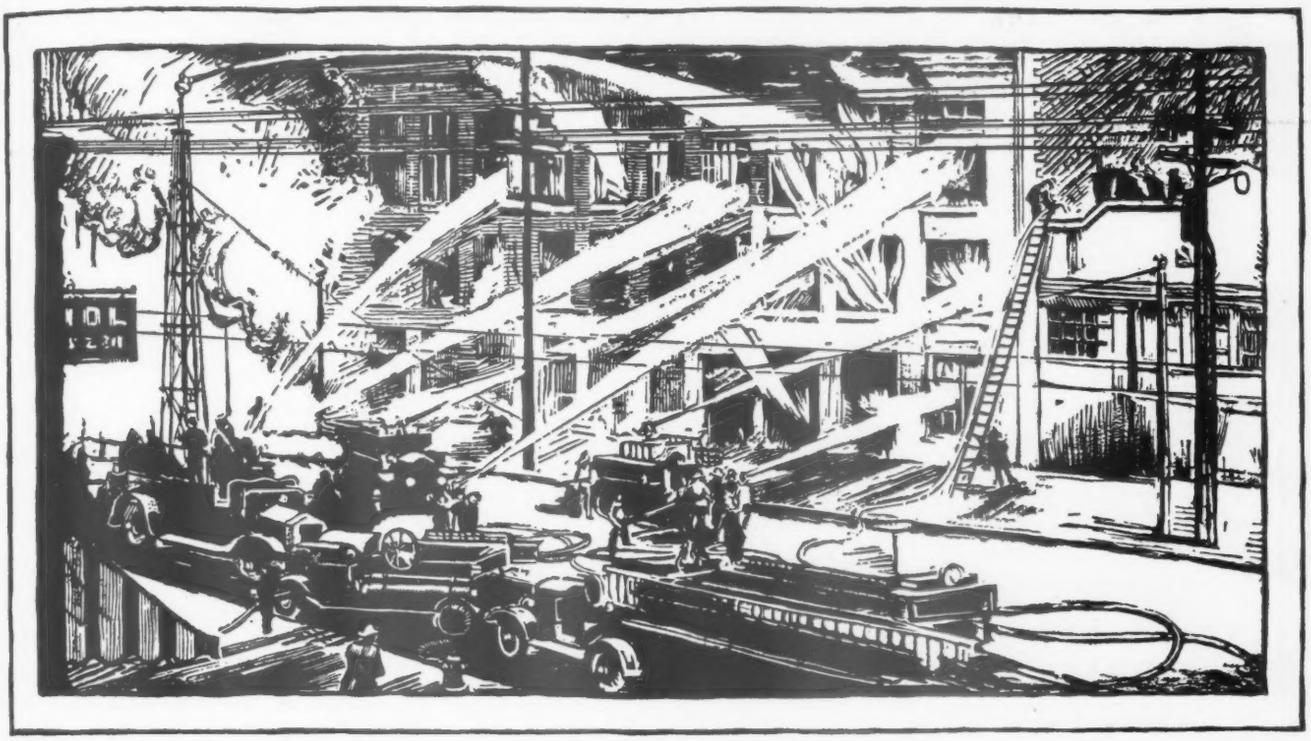
CENTRAL WEST TEXAS

BROWN COUNTY—
Baker Bros. et al, White Heirs 1.. 50 1151
Bowers et al, Cason 4 ..... * 1554
Campbell et al, Turner 2 ..... * 800
Ed. Curry et al, Chambers 4..... 4 1334
Greene Prod. Co., McCulley 1 ..... ¶1 832
Green & Co., Barnes 1 ..... * 906
Lloyd Oil Corp., Collier 1-A ..... * 1481
Windsor et al, Thomas 1..... * 668
CALLAHAN COUNTY—
Wakefield & Mook-Texas Oil Co., Aiken 1 ..... * 1812
CALLAHAN COUNTY—
Eastland Oil Co. & Shell, Kinney 1-B * 2025
Vacuum Oil Co. et al, Bennett 1... 40 1814
Atlantic Oil Prod. Co. & Mid-Sun Oil Corp., Monehun 1 ..... * 2283
Chapman et al, Fuller 1 ..... * 1607
Stepp & Keister, Shore 4 ..... * 995
EASTLAND COUNTY—
Hoffer Oil Corp.-Texas & J. E. Thomas, M. Gray 1 ..... 850 3456
Southern Oil & Pet. Co., Owens 1.. † 1283
HOOD COUNTY—
Hatfield Pet. Co., Cogdell 1 ..... * 4001
Sampson Oil Co., Juliff 1 ..... * 2640
McCULLOCH COUNTY—
Roth & Faurot, Smith 2 .....¶2½ 1578
SHACKELFORD COUNTY—
Dull-Earls Texas Co., Matthews 8.. 50 1165
Gilman & McMurray, Matthews 3.. 8 637
A. J. Hughes et al, Diller 4..... * 805
Mid-West Explo. Co., Dyer 5..... * 923
S. B. Owens, Inc., et al (was Oyster-Rife), Davis Bros. 1 ..... 35 1614
Roeser-Pendleton & Marland, Cook 12-A (Sec. 83) 70 1400
Roeser-Pendleton & Humble, Titus 2-B 20 618
Titus 3-B 25 606
Homer Slicker et al, Matthews 3... * 1195
L. B. Tannehill et al, Hill 4 ..... * 711
Chas. Wade et al, Lannon 1 ..... * 653
Wells et al, Davis 1 ..... * 830

WEST TEXAS

PECOS COUNTY—
Gulf Prod. Co., M. A. Smith 17....4800 1574
Mid-Kansas-Transcontinental, Yates 28-A 20,000 1195
Yates 29-A 6460 1220
Yates 9-H 4000 1381
WINKLER COUNTY—
Southern Crude & Westbrook, Hendrick 7-N-T-88 ..... 425 2958
Hendrick 3-O-T-88 ..... 75 2856
WARD COUNTY—
Atlantic & Delmar Oil Co., Hayzlett 2 ..... 245 2500

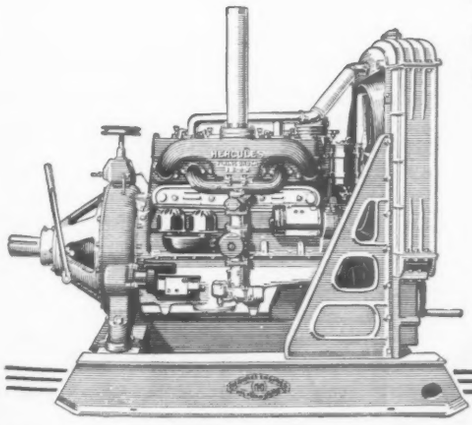
Gott
Water Cans & Coolers
Gott
Built to last... you will always be assured of a fresh supply of pure water, when you have a GOTT Water Cooler. Order one now from your supply store
GOTT Water Cans 1½ gal; 3 gal; 5 gal; and 10 gal.
GOTT Water Coolers 3 gal; 5 gal; 8 gal; 10 gal; and 20 gal.
Gotkool
H. P. GOTT MFG. CO. · Winfield, Kansas
KEEP PURE DRINKING WATER ALWAYS HANDY



Pumping 500 gallons per minute *for* Fire Fighting streams

Fire-hose quickly connected to hydrant . . . the Hercules equipped Seagrave Suburbanite Pumper throbbing powerfully . . . and into the blazing building is poured a quenching flood of water at the rate of 500 gallons per minute!

In providing power for pumping high pressure fire fighting streams Hercules dependability is never more dramatically proved. In other fields, Hercules sets just as high a standard of performance—furnishing heavy-duty power for varied types of industrial and oil-producing machinery and automotive equipment.



Well-known manufacturers of pumping outfits have standardized on Hercules.

HERCULES MOTORS CORPORATION
CANTON, OHIO, U. S. A.
West Coast Branch: Los Angeles, Cal.

THE CONTINENTAL SUPPLY COMPANY
ST. LOUIS, MISSOURI
Engine and Parts Distributor in the Mid-Continent Field

HERCULES ENGINES

BOLIVIA
BORNEO
SUMATRA
BURMA
RUMANIA
ITALY
CANADA
JAPAN
RUSSIA
POLAND
GERMANY
INDIA
ENGLAND
HOLLAND
PERSIA
SARAWAK
PERU
CHILE
VENEZUELA
THE ARGENTINE
EGYPT
MEXICO
TRINIDAD
ECUADOR
COLOMBIA
PARAGUAY
PANAMA
AUSTRALIA
STRAITS SETTLEMENTS
JAVA
FRANCE
CZECHO-SLOVAKIA
MESOPOTAMIA
SOUTH AFRICA

CATALOG STATISTICS

Every producing field—every active Territory—every pipe line company—the executive offices—the engineering departments—the superintendent—the supply store—and the countries shown at the left . . . .

ALL COVERED BY

The COMPOSITE CATALOG

Published for your USE

44,000 lbs. Information. Over Solid Car-Load special paper. Over $4,000.00 mailing cost. 233 Manufacturers' list over 900 different items, under which more than 3000 listings will be found.

The Ink used in Printing the COMPOSITE CATALOG would be sufficient to write ten million ordinary business letters.

If stacked one on another they would form a column taller than the tallest office building in the world.

Enough paper used to make a sheet 8¾" wide and 568 miles long. This would reach from Maracaibo to Panama, or from Tulsa to Terre Haute.

REMEMBER — This catalog was mailed to a selected list. If you were fortunate enough to receive one—use it. If you did not get it, there is one near you.

The COMPOSITE CATALOG
OF OIL FIELD AND PIPE LINE EQUIPMENT

Published by the CATALOG DIVISION *of*

The Gulf Publishing Company HOUSTON, TEXAS, U. S. A.

PERMITS GRANTED FOR NEW WELLS

TEXAS

ANDERSON COUNTY—E. M. Rogers, Fort Worth, W. B. Murdoc, 55, 1, D. C. Broomfield sur, 200 ft from n and w lines.

BROWN COUNTY—Gose, Lloyd & Brown, Brownwood, J. D. Abney, 170, 1, M. Cherry sur, 984 ft from w and 738 ft from s line; W. H. Mayes, 60, 4, J. M. Ross sur, 792 ft from n and 1173 ft from w line. Lloyd H. Brown et al, Brownwood, A. McIntosh, 80, 1, S. Bangs sur, 150 ft from n and e lines. Cranfill & Reynolds, Cisco, S. A. Roberson, 120, 1, S 3, S.A.&M.G. No. 3 sur, 700 ft from w and 1000 ft from s line. O. G. Windsor et al, Brownwood, G. Thomas, 40, 1, No. 611, J. H. Grimes sur, 150 ft from w and 450 ft from s line. Humble, Wichita Falls, A. W. Armstrong, 145, 21, J. Delgado sur, 780 ft s of No. 20; 20, 540 ft from n and 700 ft from w line. F. M. Greene, Fort Worth, W. D. McCulley, 70, 2, J. S. Thomas sur, 200 ft from n and w lines. R. F. Honea et al, Brownwood, G. W. Churchill, 20, 1, B 141, R. Curbier sur, 150 ft from s and e lines. G. P. Mitcham, Cisco, S. M. Keeler, 20, 1, S 39, S.P. Ry. sur, 150 ft from n and e lines of s½ of se¼. J. R. Meeker, Fort Worth, L. A. Nunn, 40, 1, J. L. Crump sur, 150 ft from n and e lines. Mac T. Anderson, Rising Star, A. Letherwood, 143, 5, S 16, J. Delgado sur, 186 ft from w and 2000 ft from s line. Lloyd Oil Corp., Fort Worth, L. J. Stanley, 292, 15, S 139, W. A. Smith sur, 300 ft n of No. 7.

BRAZORIA COUNTY — Humble, Houston, T. L. Smith, 3, J. H. Bell sur, 150 ft from e and 163 ft from s line.

BROOKS COUNTY — Milam Drilling Co., San Antonio, R. Allen, 160, 3, Blk. 47, 2620 ft from n and 21,680 ft from e line.

BEXAR COUNTY—W. W. Richardson et al, San Antonio, T. Masterson, 56, 1, P. L. Burgoi sur, 150 ft from n and w lines.

CALLAHAN COUNTY — Mcutray Oil Co., Abilene, J. A. Flores, 40, 18, S 149, B.B.B.&C. usr, 150 ft from s and e lines of nw¼ of sw¼. E. P. Campbell & Co., Abilene, I. N. Jackson, 80, 1, S 21, E.T. Ry. sur, 1320 ft from n and 150 ft from e line. W. R. Andrews et al, Putnam, R. D. Williams, 117, 75, 2973, T.E.&L. sur, se corner. Ewmo Oil Corp., Abilene, J. C. Jones, 40, 1, S 40, D.&D. Asy. sur, center of se ¼ of s 1/3. Warren-Hayes Oil Corp., et al, Cisco, P. G. Hatchett, 80, 1A, S 19, D.&D. Asy. sur, 450 ft from w and 600 ft from s line of S 19. Meredith, Benton & United Royalties Co., Wichita Falls, A. Hickman, 80, 1, S 2, I.&G.N. sur, 1170 ft from n and 1470 ft from w line of S 2. E. V. Richard et al, Cisco, L. J. Gersuch, 80, 1, S 57, B.B.B.&C. sur, 1313 ft from s and 150 ft from e line S 57. Ewmo Oil Corp., Abilene, H. C. Jones, 40, 1, S 4C, D.&D. Asy. sur, center of se¼.

CALDWELL COUNTY—Humble, Houston, A. Hinds, A 89, 4, J. Hinds sur, 526 ft from n and 150 ft from w line; F. Gray, D 46, 1, J. Hinds sur, 664 ft from n and 150 ft from e line; C. Smith, B 30, 5, J. Hinds sur, 512 ft from n and 150 ft from e line; C. Smith, A 20, 3, J. Hinds sur, 512 ft from n and 150 ft from w line; F. Gray, B 28, 2, J. Hinds sur, 150 ft from s and e lines; T. A. Tiller, 40, 4, J. Hinds sur, 150 ft from s and e lines; A. Hinds, A 69, 5, J. Hinds sur, 826 ft from n and 150 ft from w line; C. F. Dye, 40, 3, J. Hinds sur, 150 ft from n and e lines.

CARSON COUNTY—Skelly Oil Co., Tulsa, Okla., Schafer, 320, 17, S 198, B 3, I.&G.N. sur, 2310 ft from w and 330 ft from s line n½ sec. Midwest Explo. Co., Amarillo, Cooper, 80, 3, S 5, B 9, I.&G.N. sur, 990 ft from n and 330 ft from w line w½ of nw¼. Cities Service Gas Co., Bartlesville, Okla., Burnett, 17A, S 78, B 4, I.&G.N. sur, center of ne¼; 18A, S 96, B 5, I.&G.N. sur, center of nw¼.

CHAMBERS COUNTY—Rexal Pet. Crop., Houston, W. B. McLean, 2, 2, Griffith sur, 20 ft from s and w lines. Mills Bennett, Houston, Hamman, 15, 2, H. Griffith sur, 25 ft from s and w lines. Moody Corp., Tulsa, Okla., J. Ilfrey, 2, 1, H. Griffith sur, nw corner.

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending June 22	Previous week	Total this month	Total this year	This week Last Yr.	This month 1928	1928 year total
Arkansas	..	1	11	67	27	93	331
California	24	48	120	680	18	82	1,207
Louisiana	26	24	87	398	17	64	680
Kansas	11	38	78	473	14	68	1,032
Oklahoma	55	54	249	1,492	91	293	3,744
Texas	193	193	784	4,074	174	647	8,297
Total	309	358	1,329	7,184	341	1,247	15,291

CLAY COUNTY — Mid-Continent Holding Corp., Wichita Falls, Stine, A 46, 5, B 7, P.C.S.L. sur, 454 ft from n and 270 ft from e line. Saxet Oil Co., Petrolia, Stine C 13, B 3, P.C.S.L. sur, 300 ft e of No. 1. Kimmell & Woofter, Wichita Falls, J. H. Stine, 50, 1, B 12, P.C.S.L. sur, 150 ft e of center of w line.

COLEMAN COUNTY—Green & Midsun Oil Corp., Brownwood, J. T. Johnson, 80, 1, B 245, J. Flynn sur, 150 ft from e and 750 ft from s line. Eastland Oil Co., et al, Fort Worth, I. Keeney, 94, 2, No. 269, P. Cochran sur, 882 ft from s and 250 ft from w line; 3, 950 ft from w and 250 ft from s line; J. P. Morris, 40, 7A, B 24, Wm. Webber sur No. 722, 882 ft from s and 250 ft from e line.

CRANE COUNTY—Humble, Wichita Falls, University, D 160, 1, S 34, B 30, 900 ft from e and 330 ft from s line of nw¼. Tidal Oil Co., Fort Worth, University, E 80, 2, S 39, B 30, Univ. Lands sur, 330 ft from n and w lines of w½.

COMANCHE COUNTY—L. B. Fain, Rising Star, L. Poteet, 80, 1, S 45, D.&D. Asy. sur, 175 ft from n and 650 ft from e line s½ sw¼.

CHEROKEE COUNTY—Humble, Houston, Elliott-Clark, A 320, 3, M. Windson sur, 1549 ft from s and 428 ft from w line.

DONLEY COUNTY — Alanreed Oil Co., Pampa, W. J. Bell, 160, 1, S 22, B E, D.&P. sur, 2075 ft from n and 885 ft from e line ne¼.

EASTLAND COUNTY — Canyon O. & G. Co., and Crabb & McNeel, Cross Plains, W. I. Turner, 20, 2, S 30, B 2, H.&T.C. sur, 150 ft from n and e lines. Geo. W. Price, Indianapolis, Ind., C. T. Webb, 160, 1, S 26, B 2, H.&T.C. sur, 750 ft from n and 150 ft from w line ne¼ nw¼. Moody Corp., Tulsa, Okla., N. B. League, 240, 2, S 467, S.P. Ry. sur, 330 ft from s and w lines of se¼.

ERATH COUNTY — T. W. Owen, Mineral Wells, R. R. Ray, 120, 1, W. T. West sur, S.P. No. 52, 300 ft from e and 200 ft from s line. Corvette Oil Corp., Fort Worth, M. S. Wyatt, 80, 1, No. 37, S.A.&M.G. sur, 450 ft from n and e lines.

FISHER COUNTY — Cranfill & Reynolds, Cisco, Wm. Flanigan, 320, 1, S 200, B 1, B.B.B.&C. sur, 990 ft from s and w lines of w½ of S.

GRAY COUNTY—Magnolia Pet. Co., Dallas, J. B. Bowers, 160, 6, S 63, B 2B, I.&G.N. sur, 330 ft from n and e lines of nw¼. Prairie O. & G. Co., Ranger, R. W. Harrah, 80, 3, S 163, B 3, I.&G.N. sur, 330 ft from s and w lines. Sun Oil Co., Dallas, Patton, 80, 3, S 61, B B2, H.&G.N. sur, 286 from w and 250 ft from s line w½ nw¼. Texas Co., Wichita Falls, J. B. Bowers, 160, 10, S 89, B B2, H.&G.N. sur, 330 ft from n and e lines of Sec. 89; Coombs-Worley, 80, 3, S 36, B 3, I.&G.N. sur, 330 ft from s and e lines of Sec. 36; S. Faulkner, 160, 6, S 29, B B2, H.&G.N. sur, 1148 ft from s and 310 ft from s line S 29; 5, 990 ft from w and 330 ft from s line Sec. 29; J. B. Bowers, 160, 14, S 89, B B2, H.&G.N. sur, 330 ft from n and w lines of e½; 13, 1650 ft from s and 330 ft from w line e½; J. B. Bowers, 12, S 63, B B2, 2314 ft from e and 330 ft from n line Sec. 63; J. B. Bowers, 11, S 89, B B2, H.&G.N. sur, 1650 ft from w and 342 ft from s line of e½; J. K. Quinn, 160, 2, S 7, (Hutchinson County). Skelly Oil Co., Tulsa, Okla., W. Jackson, 160, 2, S 90, B B2, H.&G.N. sur, 938 ft from w and 291 ft from s line sw¼; 3, 30 ft from s and e lines of sw¼; W. Jackson, 160, 2, S 62, B B2, 330 ft from n and w lines of se¼; 1, 330 ft from s and w lines of se¼. Champlin Refg. Co., Wichita Falls, D. J. McLaughlin, 160, 2, S 33, B B2, H.&G.N. sur, 330 ft from s and e lines of ne¼. Prairie O. & G. Co., Ranger, M. L. Langham, 240, 1, S 1, B B2, H.&G.N. sur, 330 ft from s and w lines of sw¼. McMan O. G. Co., Tulsa, Okla., Wm. Jackson, 97, 2, S 90, B B2, H.&G.N. sur, 330 ft from s and w lines. Humble, Wichita Falls, Wm. Jackson, 96, 2, S 90, B B2, H.&G.N. sur, 330 ft from s and 300 ft from e line. Texas Co., Wichita Falls, J. M. Patton, 155, No. 4, S 61, B B2, H.&G.N. sur, 330 ft from s and e lines; 5, 330 ft from s and 2136 ft from w line Sec. 61; J. E. Williams, 400, 5, S 7, B 1, A.C.H.&B. sur, nw corner of Sec 7. Danciger O. & R. Co., Wichita Falls, G. N. Powell, 320, 2, S 28, B B2, H.&G.N. sur, 330 ft from s and w lines of nw¼; 3, 330 ft from n and 990 ft from w line of nw¼.

GRAYSON COUNTY—Sherman Oil & Gas Co., Sherman, R. C. Dalton, 72 2, Ingram & Reeves, 480 ft from n and 330 ft from w line.

GLASSCOCK COUNTY—Penn Oil Co., Dallas, C. Schafer, 640 1, S 4, B 32, T&P sur, center of s½ of sec 4. World Oil Co., Fort Worth, L. S. McDonald, 80, 2C, S21, B34, T&P sur, 330 ft from s and e lines ne¼ of nw¼.

GUADALUPE COUNTY—Humble, Houston, R. P. Lowman, 148, 2, Geo. Allen sur, 450 ft from s and 608 ft from w line. G. Nolte, 1, J. Sowell sur.

HUTCHINSON COUNTY—Prairie O. & G. sur, 660 ft n of No. 3. D. Shaw, 640, 5 S, Co., Ranger, D. Shaw, 640, 5 S 27, B Y, A&B sur, 660 ft w of No. 4. Texas Co., Wichita Falls, J. Q. Quinn, 160 2, S 7, B 9, I&GN sur, 990 ft from s and 330 ft from w line of sc¼.

HASKELL COUNTY—Cowboy Evans et al, Midland, Reynolds 60, 1, J. Fenner sur, 400 ft from n and 2786 ft from w line. Barnsdall Oil Co., Tulsa, Okla., D. Roberts 640, 1, S 170, P. Maas sur, 250 ft from s and e lines of nw¼.

HARRIS COUNTY—Humble, Houston, G. L. Glass 40, 1, HE&WT No. 6 sur, 300 ft from e and 50 ft from n line. Rolyat Prod. Co., Houston, Wheeler-Pickens 2, 1, B 28, Stevenson sur, ne corner of blk 28. Navarro Oil Co., Houston, F. F. Dooley 52, 16, B 16, J. Hamilton sur, 50 ft from e and 487 ft from s line. Harvey S. Smith, Inc., Houston, H. Ward 7, 1, J. B. Jones sur, 350 ft n of center of s line of blk 7. Rio Bravo Oil Co., Houston, Settegast A 102, A8, J. Kopman sur, sw of No. 7. Navarro Oil Co., Houston, T. L. Smith 3, J. H. Bell sur, 150 ft from e and 163 ft from s line.

HUDSPETH COUNTY—Geo. E. Richardson et al, El Paso, S. J. Thaxton 640, 1 S 9, B 16, School sur, center of nw ¼.

HARDIN COUNTY — Paraffine Oil Co., Houston, Fee 12, 80, 419 ft from e and 40 ft

from n line. Lake View Oil Co., Sour Lake, Hardin County Oil Co., 35, 59, S. Jackson sur, 200 ft from w and 500 ft from e line. W. G. Christian, Houston, Fee 1, 1, B 15B, J. Milholme sur, 50 ft e of center of w line.

HOWARD COUNTY—Moody Corp., Tulsa, Okla., D. Roberts E 240, E16, S 136, B 29, W&NW sur, 990 ft from s and 330 ft from e line se¼. D. Roberts B 160, B16, S 137, B 29, W&NW sur, 990 ft from n and 330 ft from w line nw¼ nw¼; B17, same sur, 990 ft from s and 330 ft from w line sw¼ of nw¼. D. Roberts E 240, E15, S 136, B 29, 990 ft from n and 330 ft from s line ne¼ of ne¼. Merrick & Lamb, Ardmore, Okla., H. R. Clay 80, 8, S 126, B 29, W&NW sur, 1070 ft from s and 1110 ft from e line.

JEFFERSON COUNTY—Stella Oil Co., Beaumont, W. P. Davidson ¼ 4, B 32, J. A. Veatch sur, ne corner.

JIM HOGG COUNTY—T. J. Conway, San Antonio, B. J. Leyendecker 40, 2, S 234, B 4, 450 ft from n and 50 ft from w line.

JONES COUNTY—W. G. Clark, 1730 N Eighteenth St., Abilene, G. L. Miller, 160, 1, S 29, B 18, 330 ft from n and w lines. A. Newnon, 80, 1, S 52, B 18, 330 ft from n and e lines. T. P. Coal & Oil Co., Ranger, W. H. Smith, 60, 1, S 51, B 18, T&P sur, 300 ft from s and 2043 ft from w line.

LIBERTY COUNTY — Navarro Oil Co., Houston, A. Baldwin et al, 15, 5, M. G. White sur, 200 ft from n and 50 ft from e line.

MONTAGUE COUNTY—Heydon Oil Co., Bellevue, J. L. Nail, 160, 1, S 20, J. C. S. L. sur, 1083 ft from e and 270 ft from s line.

MOORE COUNTY—Skelly Oil Co., Tulsa, Okla., M. B. Armstrong, 10, Freeman-Bazemore sur, 1320 ft from w and 330 ft from s line.

NAVARRO COUNTY—Pure Oil Co., Fort Worth, A. Edens, 50, 1, E. Friar sur, 385 ft from sw and 455 ft from se line.

PECOS COUNTY—Marland Oil Co., Fort Worth, University 1, S 10, B 17, Univ. Lands sur, 330 ft from ne and e lines se¼ of ne¼. I. G. Yates, 320, S20, S 60, B 1, I&GN sur, 1446 ft from n and 3400 ft from w line e½; S19, same sur, 1252 ft from n and 2736 ft from w line e½; 18S, same sur, 1129 ft from n and 2769 ft from w line e½. Jayhawk Pet. Co., Osborne, Kas., C. J. Price, 160, 1, S 6, B 12, H&GN sur, 800 ft from w and 1100 ft from s line s½ of n¼. Savoy Oil Co., Tulsa, Okla., M. A. Smith, 80, 3, S 24, B 194, GC&SF sur, 330 ft w of center of e line.

PANOLA COUNTY—Magnolia Pet. Co., Dallas, T. C. Adams, 489, 4, E. Jones sur, 660 ft from s and w lines. C. G. Steele, 580, 16, B. Jordan sur, se corner.

PALO PINTO COUNTY—Bob Elmore, Fort Worth, Costello, 500, 1, S 2036, B 50, E. P. Costello sur, 1086 ft from n and 200 ft from w line.

SHACKELFORD COUNTY — Midwest Explo. Co., Amarillo, J. F. Dyer, 80, 5, S 85, B 12, T&P sur, 210 ft from e and 1270 ft from s line e½ of nw¼. J. W. Radcliffe, Electra, R. E. Collinsworth, 40, 1, S 13, Univ. Lands sur, 450 ft from w and 150 ft from s line. Loggie & Arendt Oil Co., Albany, J. Blach, 320, 4C, S 389, TE&L sur, 1250 ft from nw and 140 ft from sw line w¼. Scott & Walker, Albany, L. C. Huskey, 320, 13, 568, TE&L sur, 600 ft s of No. 5. Tannehill, Kiser & Fleming, Albany, L. H. Hill, 4, S 2, L.A.L. sur, 320 ft n of No. 3. W. M. Smith, Fort Worth, W. M. Broyles, 20, 1, S 14, L.A.L. sur, 150 ft from n and w lines. Jno. L. McMeans, Fort Worth, T. J. Coon, 50, 1, 1531, TE&L sur, 150 ft from n and e lines. A. D. Robinson, Dallas, Blach, 320, 13, 372, TE&L sur, 300 ft nw of No. 12. Texas Consolidated Oil Co., Breckenridge, J. M. Reynolds, 80, 1B, S 23, B 11, T&P sur, 150 ft from s and w lines of nw½ of nw ¼. Oyler & Morris, Moran, Broyles, 80, 1, S 16, L.A.L. sur, 450 ft from n and 150 ft from w line; 2, same sur, 300 ft s of No. 1; 3, same sur, 300 ft e of No. 1; 4, same sur, 300 ft ne of No. 3; 5, same sur, 50 ft se of No. 4. Jno. L. McMeans, Fort Worth, L. D. Crow, 50, 1, 1530, TE&L sur, 150 ft from n and e lines. Geo. Callihan, Albany, J. H. Nail, 40, 8, s S 150, E. T. Ry sur, 300 ft from n and 1000 from e line. Roeser & Pendleton and Phillips Pet. Co., Albany, L. C. Huskey, 240 1, 529, TE&L sur, 150 ft from s and w lines of ne¼. Roeser & Pendleton and Marland Pet. Co., Albany, W. I. Cook, A1, S 140, E. T. Ry sur, 240 ft from n and 220 ft from e line of se¼. Warren Hayes Oil Corp., and Keyes, Cisco, Broyles, 80, 2, S 16, L.A.L. sur, 750 ft from n and 1100 ft from e line. Cranfill & Reynolds, Cisco, J. R. Moberly, 90, 2B, S48, B 11, T&P sur, 250 ft from e and 700 ft from s line s½ of se¼. C. W. Waddington, 3408 Gordon Ave., Fort Worth, Diller, 40, 1, S 42, L.A.L. sur, 150 ft from s and w line s of sw¼ of nw¼.

STEPHENS COUNTY — Texas Louisiana Power Co., Ranger, C. Hefley, 60, 1, S 68, B 6, T&P sur, 240 ft from e and 950 ft from s line e½ of ne¼.

SAN PATRICIO COUNTY—Magnolia, Dallas, C. Freeman, 80, 1, S 57, E. J. McGloin sur, 660 ft from s and w lines of nw½.

THROCKMORTON COUNTY—C. A. Pennell, Loving, W. H. Downing, 60, 1, No. 913, 750 ft from s and e lines. F. C. Morton, Albany, F. A. Matthews, 200 2, S 227, E.T. Ry sur, 679 ft from e and 660 ft from s line sw¼ se¼.

UPTON COUNTY—Dixie Oil Co., Inc., McCamey, A. S. Burleson, 1040, 30, S 2, Nidiver sur, 990 ft from n and 2640 ft from e line s 2.

WICHITA COUNTY — T. F. Hunter, Wichita Falls, T. J. Waggoner, 3C, B 1, H. George sur, 230 ft from n and 450 ft from w line. Jas. H. White et al, Wichita Falls, G. R. Hodge, 144, 1, B 38, W. V. F. L. sur, -50 ft from n and 1253 ft from e line. Rubsam & Hunter et al, Wichita Falls, W. D. McClure, 40, 8, B 5, GC&SF sur, 300 ft e of No. 6. Cunningham & Pennell, Mineral Wells, W. D. McClure, 76, 2, S 5, GC&SF sur, 150 ft from n and 1800 ft from e line. King Royalty Co., Wichita Falls, Couch, 90, 18, J. W. Robertson sur, 1075 ft from n and 1000 ft from e line of sur. Morgan & Anderson, Electra, E. E. Goetze, 111, 17, SA&MG, No. 2 sur, 300 ft from w and 750 ft from s line. Mid-Continent Holding Corp., Wichita Falls, N. R. Temple, 70, 1, B 8, McCool sur, 450 ft from n and 150 ft from e line. Gulf, Fort Worth, G. Jennings, 240, 20, S 12, HT&B sur, 680 ft sw of No. 1. G. Jennings, 280, 9, S 8, HT&B sur, 150 ft from e and 3000 ft from s line. W. A. Littlefield, Iowa Park, Fee, 40, 1, S 1, SA&MG sur, 150 ft e of center of w line. Riner & Bailey, Wichita Falls, J. D. Michie, 40, 6A, L. Netherly sur, blk 8, 150 ft from s and e lines. J. D. Michie, 40, 1C, B 9, L. Netherly sur, 150 ft from s and w lines. C. J. Bohner, Burkburnett, C. T. Taylor, 5, 1, B 98, R.R.V.L. sur, w central part of lease. Reno Oil Co., Wichita Falls, Williams-Parker, 100, 1, J. T. McCool sur, 1665 ft from s and 150 ft from w line, blk 5. Culbertson Co., Wichita Falls, J. & J. Waggoner, 465, 59, S 13, BS&F sur, 945 ft from e and 730 ft from s line. Golding & Cochran, Wichita Falls, J. & J. Waggoner, A 120, 5, S 22, H. George sur, se cor of sec. 22. Jeffers, Gilchrist, Walz & Peevey, Burkburnett, D. G. Hobson, 100, 1, No. 3, GC&SF sur, 851 ft from n and 650 ft from w line. Swanner & Williams, Wichita Falls, Williams-Parker, 150 3, B 5, J. McCool sur, 450 ft from w and 150 ft from s line, blk 5.

WILBARGER COUNTY — Phillips Pet. Corp., Bartlesville, Okla., W. T. Waggoner, DD, 40, 3 S, 42, B 4, H&TC sur, 330 ft from s and w line s sw¼ of se¼. O. J. Norwood, 100, 5, S 18, B 4, H&TC sur, 1996 ft from s and 200 ft from e line. C. P. Burton et al, Wichita Falls, W. T. Waggoner, I 80, I4, S 40, MEP&P sur, 300 ft w of No. 2. Texas Co., Wichita Falls, W. T. Waggoner, E18, S 24, B 4, H&TC sur, 205 ft from n and w lines of sec 25. W. T. Waggoner, A364, S 7, H&TC sur, 2310 ft from e and 900 ft from s line of sec 7. Wilbarger Oil Co., Wichita Falls, W. T. Waggoner, 290, 4A, S 55, B 4, H&TC sur, 340 ft n and 150 ft e of No. 2. E. B. Lawson, Tulsa, W. T. Waggoner, 40, 5 S, S 25, B 4, H&TC sur, 660 ft from w and 200 ft from n line sw¼ se¼. Staley, Wynne & Co., Wichita Falls, W. T. Waggoner, 40, S2, S 25, B 4, H&TC sur, 500 ft s of No. 1. Phillips Pet. Corp., Bartlesville, W. T. Waggoner, RR, 40, 3, S 44, H&TC sur, 330 ft from n anw w lines of se¼ ne¼. J. E. Dunaway et al, Wichita Falls, W. T. Waggoner, B 80, 3, S 25, B4, H&TC Ry sur, 150 ft from n and 660 ft from e line; 4, same sur 150 ft from n and 200 ft from w line, sec 25.

WEBB COUNTY—Trussell, Cezeaux & Putnam, Laredo, A. M. Bruni, 200, 3, S 10, B 30, M. Arispe sur, 300 ft from nw and 150 ft from ne line, B3.

WARD COUNTY—Penn Oil Co. & Atlantic, Dallas, J. B. Bennett, 160, 1, S 16, B 34, H&TC sur, n corner of s½. Gulf Prod. Co., Ft. Worth, Wristen, 640, 1, S 18, B S H&TC sur, 217 ft from nw and 1107 ft from sw line, sec 18.

WHARTON COUNTY—Vacuum Oil Co., S. T. Taylor, 50, 3, S. F. Austin sur, 700 ft from nw and 50 ft from sw line.

WINKLER COUNTY—Gulf Prod. Co., Fort Worth, O. Clapp, 320, 1, S 37, B 26, 990, 990 ft from s and w lines of sec 37. Dixie and Southern Crude Oil Pur. Co., Fort Worth, I. Hendrick, 445, No. M34, S 33, B 36, 990 ft from e and 1980 ft from s line sec 33. T. G. Hendrick, 640, L1, S 15, B B12, 330 ft from w and 440 ft from n line sec 15.

WHEELER COUNTY — Fain-McGaha Oil Corp., Wichita Falls, Binkley-Caine, A 560, 2, S 55, B 24, H&GN sur, center of se¼.

YOUNG COUNTY — Continental Oil Co., Wichita Falls, R. Cempbell, B 200, 8B, S 1390, TE&L sur, 400 ft e of No. 7. Steed & Gaus, Wichita Falls, L. A. Snider, 400, 16, R. Wilson sur, 870 ft from w and 150 ft from n line.

ZAPATA COUNTY—H. Muckelroy, Jr., Laredo, D. G. Trevino, 40, 2, S 66, B 3, 150 ft from n and w lines. Marts & Beavens, Laredo, Trevino, 40, 1, Por. 3, Blk 2, No. 1, 150 ft from s and e lines.

CALIFORNIA

COYOTE HILLS—Standard Oil Co., Emery 43-A, 13-3-11.

FRUITVALE—Mohawk Pet. Co. No. 5, 27-29-27.

HUNTINGTON BEACH—F. E. Bundy, Camp Ground 2, 11-6-11.

LONG BEACH—Hancock Oil Co., Signal 19, 19-4-12.

LOS ANGELES COUNTY—Hancock Oil Co., Alondro 1, 23-3-14. Joseph Hummel, No. 1, 28-3-14.

MIDWAY—Standard Oil Co., No. 265, 7-32-24.

MENDOCINO COUNTY—The Twin State Oil Co., No. 1, 14-12-17.

SANTA BARBARA—General Pet. Corp., Wheeler 1, 29-4-27; Mesa School 1, 29-4-27. E. E. Combs and A. J. Odell, No. 10, 29-4-27. Pacific Western Oil Co., Palisades-Comm. 1, 29-4-27. General Pet. Corp., O-P 1, 29-4-27. Craft Pet. Corp., No. 1, 29-4-27. Altadena Oil Co., No. 1, 29-4-27. G. M. Knapp, No. 1, 29-4-27. E. A. Parkford, No. 1, 29-4-27. Union Oil Co., C. W. C. 1, 29-4-27.

SANTA FE SPRINGS—The Elmer Oil Co., Jameson 1, 6-3-11. General Pet. Corp., Santa Fe 143-A, 5-3-11; Santa Fe Comm., 179-H, 6-3-11.

SEAL BEACH—Marland Oil Co., Bixby 29, 11-5-12.

VENTURA—Associated Oil Co., Lloyd 107, 23-3-23; McGonigle 7, 23-3-23.

OKLAHOMA

CADDO COUNTY—English Drilling, Huron 1, c nw se, 26-6n-10w.

CREEK COUNTY—Pioneer Oil, Williams 1, se sw, 26-14-9e. George F. Collins 2, cnl se sw, 12-17-11e. W. S. O'Hare et al, Mathews 1a, ne sw nw, 27-18-11e.

GRADY COUNTY—Meridian Gas, Ridley 1, c s½ se, 25-4n-8w.

GRANT COUNTY—Argo, Howell 2, se, 22-27-3w.

HUGHES COUNTY — Jarvis and Holm, Street 3, se sw sw, 21-7-8e. Gypsy et al, Long 1a, (twin) nw se, 14-8-9e. Stecklebury, Lowery 1, nw, 19-9-10e.

KIOWA COUNTY—Cummings et al, Prough 2, se ne se sw, 18-6n-16w.

LOGAN COUNTY—Shell Petroleum, McCully 10, ne nw se, 30-19-4w. Shell, Storey 1, se sw, 30-19-4w. Shell, Sebranek 6, se sw ne, 30-19-4w.

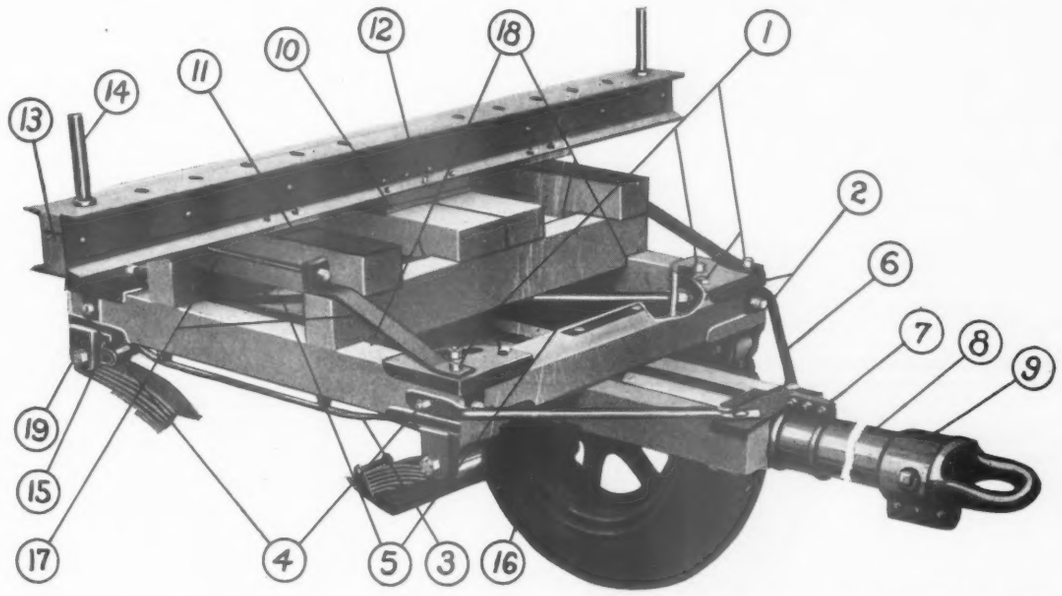
NOBLE COUNTY—Mid-Co., Case 15, ne sw nw, 29-24-1w. Indian Territory Illuminating Oil, McCormick 1, ne se, 33-21-1w.

OKLAHOMA COUNTY—Cromwell et al, Trosper 2, sw nw se nw, 12-11-3w.

OKMULGEE COUNTY—Marquette et al,

XUM

SPRINGFIELD TRAILERS



19 FEATURES WHICH PROVIDE STURDINESS, ADJUSTABILITY AND EASE OF REPAIR

In Springfield Oil Field Trailers you will find many refinements which make for more dependable and satisfactory service. For instance, the bracing used to tie the pedestal together tends to neutralize the weave. Nuts on all braces provide for taking up slack as it appears. Wood is generally used, being the most resilient. Radius rods obtain direct pull. All wood members are shouldered which gives greater solidity. Rear end spring being boxed with roller bushing allows free movement with minimum wear. Clamping collars on pole permit exact length adjustment between bolsters. Forward and backward thrust cushioned through a coil spring.

These are only a few of the many refinements which are incorporated into Springfield Oil Field Trailers to secure dependable service over a long period of time. Full description is contained in an illustrated circular. A copy will be sent on request. Write today.

SPRINGFIELD

WAGON AND TRAILER CO.

DALLAS, TEXAS, 1106 Wood St. SPRINGFIELD, MO. MEMPHIS, TENN. 339 South Front St.

Distributors at Tulsa and Oklahoma City, Oklahoma; Amarillo, El Paso and San Antonio, Texas, Little Rock, Arkansas, and Richmond, Va.

"BUILDERS OF TRANSPORTATION FOR OVER FIFTY YEARS"

Williams 6, nw ne ne, 22-13-12e, (owd). L. C. Wheeler et al, Fish 2, ne, 6-15-12e.

OSAGE COUNTY—Peters Petroleum & Producers and Refiners 1, se, 19-26-7e. White Eagle 1, nw ne se, 23-26-7e. The Texas, 7, nec or sw se, 30-25-8e. Kay County Gas, 7 "B," nw sw ne, 22-24-7e. Stoner Bros. et al, 4, csl nw, 31-24-9e. Continental, 4, sw ne se, 5-23-9e. Braden and Moore, 16, se sw ne, 12-21-8e. Gray, 9, cel w½ ne, 20-20-11e.

PAYNE COUNTY—Twin State, Penny 1, se sw se, 25-19-4e. Deep Rock, Cole 2, se ne, 10-18-4e.

PONTOTOC COUNTY—Benedum & Trees, Mole 5, ne se ne, 31-5-5e. Benedum & Trees, Lowery 1, ne sw ne, 31-5-5e. Benedum & Trees, Coker 1, sw nw nw, 31-5-5e. Benedum & Trees, Molly 1, se sw, 30-5-5e.

POTTAWATOMIE COUNTY — Erwin & Martin et al, Kelly 3, nw ne ne, 2-7-4e. Twin State, Rhodd 1, sw ee ne, 8-7-4e. Darby, Nixon 2, se sw sw, 9-7-4e. Mid-Continent, Robbins 1, sw se sw, 9-7-4. Mid-Continent, Robbins 2, se sw, 9-7-4e. Magnolia, Caudle 2, sw nw sw, 13-7-4e. Darby, Youngblood 4, nw ne nw, 16-7-4e. Darby, Youngblood 5, sw ne nw, 16-7-4e. Minnehoma, Simms 2, se ne se, 16-7-4e. Houston, Wyatt 4, nw sw, 17-7-4e. Sinclair, Neeley 6, ne sw sw, 25-7-4e. Sinclair & Mid-Continent, Cummings 1, se ne se, 6-7-5e. Shaffer, Adams 1, nw ne, 11-6-3e. T. B. Slick, Alexander 1, ne nw se, 19-6-4e. Slick and Amerada, Walker 2, se ne se, 19-6-4e. Slick and Amerada, Walker 3, sw ne se, 19-6-4e. Independent and Margay, Crain 1, se sw ne, 8-7-4e.

SEMINOLE COUNTY—Continental, Johnson 4, ne se nw, 18-9-7e. Continental, Johnson 3, nw se nw, 18-9-7e.

STEPHENS COUNTY — Carter, Carter-Kerans 6, sw ne se, 21-3n-5w. Pace et al, Marks 1, sw ne se, 13-2s,8w.

TULSA COUNTY—Brooks Drilling, Hawkins 4, nw se nw sw, 29-19-12e.

WOODS COUNTY—Peerless et al, Cromwell 1, c sw se, 14-28-16w.

KANSAS

BUTLER COUNTY—Empire, Nixon 1, sw se se, 15-27-5e. National, Guinn 1, sw nw nw, 2-25-5e. Empire, Cranston 10, sw se se, 22-27-5e. Leonard, Kinney 6, ne sw se, 29-26-5e.

COWLEY COUNTY—Rider et al, Franks 1, ne nw nw, 30-31-5e.

DICKINSON COUNTY—Cress et al, Meuli 1, ne, 12-15-2e.

GREENWOOD COUNTY—Gordon & Stats, Blakely 1, sw ne, 3-22-11e. Empire, Edwards "B" 2, nw se se, 21-23-11e. Empire, Norton "A" 2, ne nw ne, 22-22-12e. The Texas Company, Edwards "C" 6, ne sw se, 21-23-11e.

MARION COUNTY—Tidal, Ewert 2, ne sw sw, 7-19-3e.

LOUISIANA

ACADIA PARISH—Cline, Smith & Cline, Lake Charles, Concklin 9, 45-9s-2w, 674 ft n and 862 ft w of se c. Ratliff Oil Co. and McLean, Lake Charles, M. C. Crusel 2, 42-9s-2w, 50 ft s and 50 ft w of ne c. Yount-Lee Oil Co., Beaumont, Texas, Houssiere-Latrielle 7, 47-9s-2w, 5725 ft e and 1070 ft n of sw c.

ASCENSION PARISH—Gulf Ref. Co. of La., Houston, Texas, United Lands Co. 15, 22-10s-4e, 2318 ft s and 393 ft w of ne c.

CADDO PARISH—Dixie Oil Co., Inc., Shreveport, Dillon 98, 13-21n-15w, 2140 ft n and 1075 ft e of sw c. Dixie Oil Co., Inc., Shreveport, Dillon 99, 13-21n-15w, 1600 ft n and 1500 ft e of sw c. Falcon Oil Co., Inc., Shreveport, Nunley 1, 29-20n-15w, 3212 ft n and 2591 e of sw c. Gulf Ref. Co. of La., Shreveport, La., Levee Board A-17, 34-21n-16w, 1126 ft s and 150 ft e of nw c ne. S. T. Onyett, Tr., Shreveport, Dixon 1, 10-19n-14w, 150 ft s and 150 ft e of nw c sw sw.

CALCASIEU PARISH—C. M. Crotty, Lake Charles, J. F. Lillard 15, 28-9s-11w, 265 ft s and 356 ft e of nw c se se nw. Union Sulphur Co., Sulphur, Fee 749, 29-9s-10w, 133 ft w and 128 ft s of center.

CAMERON PARISH — The Texas Co., Shreveport, Calcasieu Lake A-4, T138-13s-R9w, 8900 ft w and 3150 ft n of ne c Sec. 1-14s-9w in T 13s-R9w, in Calcasieu Lake.

IBERIA PARISH—The Texas Co., Shreveport, Vermillion Bay A-4, T 16s-R 6e, 15,336 ft w and 13,907 ft s of se c Sec. 20-15s-6e, in T 16s-R 6e in Vermilion Bay.

LA SALLE PARISH—G. W. Zoder, Alexandria, King 3, 13-10n-1e, 150 ft n and 600 ft w of se c ne.

OUACHITA PARISH—Arkansas Louisiana Pipe Line Co., Shreveport, Mrs. Kate Cole 1, 10-18n-4e, 570 ft s and 570 ft e of nw c sw. West Va. O. & G. Co., Monroe, West Va. Timber Co. 8, 8-18n-4e, 660 ft s and 1320 ft e of nw c. H. L. Woods, Tr., Monroe, Miss Genie & Manie Miller 1, 18-18n-5e, 660 ft n and 475 ft w of center.

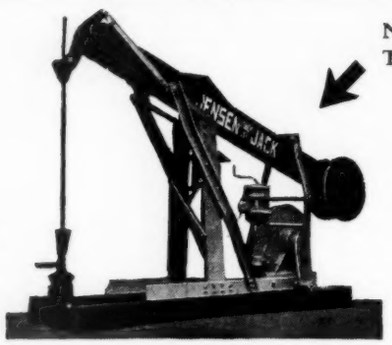
RED RIVER PARISH—Root Refining Co., Shreveport, Home Savings & State Bank 1, 8-13n-10w, 330 ft n and 330 ft w of center.

RICHLAND PARISH — Northern La. Natural Gas Co., Shreveport, Boykin (relief well) 1, 20-17n-6e, 1034 ft e and 216 ft n of sw c. Northern La. Natl. Gas Co., Shreveport, Boykin Relief Well 2, 20-17n-6e, 733 ft e and 911 ft n of sw c se. Palmer Corp., of La., Shreveport, John A. Eubanks 1, 26-17n-6e, 1100 ft n and 350 ft w of sw s se nw.

SABINE PARISH — R. L. Gay, Trustee, Zwolle, Bowman-Hicks 4, 14-7n-14w, 500 ft w and 200 ft n of center se. R. L. Gay, Trustee, Zwolle, Sabine Lbr. Co. 2, 23-7n-14w, 300 ft s and 264 ft e of nw cor of nw¼ or ne¼.

TERREBONNE PARISH—The Texas Co., Shreveport, Bay Coon Road B-3, 17-22s-18e, 4179 ft s and 137 ft e of nw c.

UNION PARISH—Natural Gas Producing Co., Bastrop, Haile Bros. 3, 11-21n-3e, 1880 ft s and 620 ft w of ne c.



No Side Thrust

Absolutely Weatherproof

For Wells up to 5000'

Electric

Here is an Electric Jack so sweetly attuned and so smoothly balanced that an absolute minimum of power is required to pump any well. Does the work of electric units with motors several times as large, and does it without strain or vibration. A straight lift, with no side thrust. Completely weatherproof—requires no house. Made in different sizes for wells up to 5000'. Write for literature and prices.

JENSEN BROS. MFG. CO.
COFFEYVILLE, KANSAS
Export Office: 136 Liberty St., N. Y.

JACKS

TIMKEN BEARING EQUIPPED

World's Deepest Rotary

Long Beach Calif.—Shell Oil Company's world record deep well—Nesa 11—is drilling ahead at 8705 feet, with the formation running to gray sand and streaks of brown shale. The well is very interesting from a geological standpoint and is expected to prove or discount the theory that still another producing sand will be found in the Long Beach field.

WILDCATS FROM ALL SECTIONS

KANSAS

STEPHENS COUNTY—Trees Oil Co.'s Candy 1, sw ne sw, 3-35-38w, td 500 ft, mvg in rotary.

SUMNER COUNTY—Davidson et al's Strickland 1, sw se, 12-35-1w, rig.

STEPHENS COUNTY—W. Sidwell et al's Kelly 1, sw ne, 16-34-38w, sd 1310 ft.

BARBER COUNTY—Skelly's Temple Ranch 1, sw ne, 13-34-15w, rig.

SUMNER COUNTY—Gypsy & Blankenship's Robeck 1, c sw nw, 27-34-4w, dr 3825 ft. Morgan & Carey's Hawkins 1, sw se, 9-34-1e, dr 350 ft. Marland's Curry 1, nw sw, 26-34-2e, top Chat 3424 ft, td 3450 ft, pulling pipe.

BARBER COUNTY—Barbara Oil Co.'s Angel 1, c nw ne, 14-33-13w, dr 3890 ft. Robertson et al's Powell 1, c se se, 11-32-10w, rig.

COWLEY COUNTY—J. B. Markey's Tatum 1, se sw, 11-31-6e, sd 500 ft. Marland's Hiatt 1, sw ne, 8-31-6e, dr 2320 ft.

BARBER COUNTY—Allison & Fitzwilliams' Morrise 1, c nw se se, 9-30-12w, fsh 3225 ft.

KINGMAN COUNTY—Gypsy's Kincaid 1, ne nw, 18-29-5w, dr 3815 ft.

SEDGWICK COUNTY—Johnson & Marshall's Roy 1, c ne se sw, 23-29-1w, dr 700 ft. Lario Teachoiff 1, ne sw, 27-19-1w, dr 265 ft. Sullivan et al's Shelly 1, c nw ne se, 32-29-2e, sd 2990 ft.

PRATT COUNTY—Jones & O'Haver's Lunt 1, csw nw, 15-28-14w, fsh 2540 ft.

SEDGWICK COUNTY—Hartman & Skaer & Carter's Hitchinson 1, c se se sw, 23-28-2w, dr 4025 ft, lime hfw. Magnolia's Wise 1, nwc, 36-22-2w, ur 6-in cas 3530 ft hfw. Kellar & Lewis' Buckles 1, nw se, 3-28-1w, co 260 ft, td 430 ft. Kyle et al's Pinney 1, c sw nw se, 29-28-1w, spd and sd. Shawver et al's Scott 1, c se sw sw, 10-28-1e, ur 8-in cas 2790 ft. LaFont et al's Carlton Bros. 1, c se se sw, 24-28-1e, 1285 ft.

KIOWA COUNTY—Wilcox O. & G. Co.'s Woodward 1, nec, 35-27-17w, ur 6-in cas 3622 ft.

SEDGWICK COUNTY—Prairie-Slick's Rosenhagen 1, c sw se ne, 33-27-4w, ur 6-in cas 3750 ft. Miller & Wentz's Shaeffer 1, nw ne, 9-27-2w, dr 3055 ft. Hammond & Stout's Roeder 1, sw nw, 23-27-2w, dr 2005 hfw 1890 ft. Blankenship & Washoma's Tuttle 1, sw nw, 1-27-1e, wx 3397-3410 ft, hfw pb to chat 2988 ft. Lario's Calkins 1, sw se, 7-27-2e, rog. E. W. Marland's Huggins 1, c se nw sw, 30-27-2e, rig.

BUTLER COUNTY—Alladdin's Bronsenger 1, ne se, 24-27-3e, dr 1360 ft.

RENO COUNTY—Austin Drlg. Co.'s Strickey 1, swc nw, 12-26-5w, dr by tools 2550 ft.

SEDGWICK COUNTY—Washabaugh's Harrison 1, c nw ne ne, 3-26-2w, dr 520 ft. Frank Wahn's Wilson 1, c ne nw se, 9-26-1w, rig and tools. Kroeder et al's Harden 1, sw nw sw, 20-25-1e, sd 1100 ft. Simmons & Canary's Scott 1, ne nw ne, 22-26-1e, sd 1420 ft. Burnett's Davidson 1, c nw nw sw, 27-26-1e, 2650 ft. Twist et al's Armstrong 1, ne nw, 28-26-1e, spd and sd. Patton & Wentz's Swanson 1, nw ne, 6-26-2e, pump 150 bbls oil, 225 bbls water. Producers Oil Co.'s Jones 1, c sw ne se, 31-26-2e, sd 3409 ft, hfw 3357-75 ft. Empire's Henderson 1, swc, 35-25-4w, dr 3300 ft. Deering-Marshall's Dick 1, c sw, 4-25-1w, csg trouble, td 2345 ft. Connell & Slick's Mahannah 1, c ne se se, 3-25-1w, ur 6-in cas, td 3315 ft. Twist et al's Joseph 1, 4-25-1w, sd 1980 ft. Morgan et al's Corn 1, sw ne, 28-25-1w, dr 3815 ft.

BUTLER COUNTY—White Eagle's Bacholder 1, sw c, 17-25-3e, dr 1650 ft.

RENO COUNTY—Skelly's Birkett 1, ne sw, 30-24-7w, ru.

HARVEY COUNTY—Independent & Reserve's Moulds 1, c ne, 7-24-1w, dr 1728 ft. Jolly & Ogg's Randall 1, nec, 11-24-1w, sd 3444 ft. Patton et al's Buning 1, cse sw ne, 18-24-2e, dr 3120 ft.

BUTLER COUNTY—Crawford et al's Thompson 1, nw sw, 2-24-3e, dr 210 ft. Shell's Thiesstein 1, c se sw se, 10-24-3e, hfw 2835-40 ft, dr 2892 ft. Smith & Ash's Donnelly 1, nec, 8-24-6e, dr 3130 ft.

HARVEY COUNTY—Rosenthal et al's Ingalls 1, c nw sw, 24-33-3w, hfw 2370 ft, rig burned and rebldg. McCulloch's Prouty 1, nw sw, 3-23-1w, co 1300 ft. Jolly & Ogg's Hupp 1, se ne, 22-23-1w, fsh 3220 ft. Margaret Gay Oil Co.'s Grouse 1, nw ne nw, 29-33-1w, sd 3012 ft.

HODGEMAN COUNTY—Phillips' Housman 1, c nw ne ne, 30-22-22w, rig.

RENO COUNTY—Perry et al's Oswald 1, ne ne se, 30-22-5w, dr 3605 ft.

HARVEY COUNTY—Roth & Fauret's Bombrowsky 1, nwc, 26-22-1e, fsh tools 2415 ft. Prairie & Slick Connell Oil's Gatz 1, nw se, 30-22-1e, 3272 ft.

PAWNEE COUNTY—F. C. Troupe's Lovett 1, cel ne ne, 31-21-16w, sd 1560 ft.

McPHERSON COUNTY—Ted Washabaugh's Vosshell 1, ne ne, 9-21-3w, fsh bailer, td 3302 ft. Helmerich & Payne's Rosen 1, c ne se sw, 23-21-2w, sd 2490 ft. Helmerich & Payne's Klassin 1, se ne ne, 14-11-1w, sd 417 ft.

MARION COUNTY—Holworth et al's Skiles 1, se nw nw, 30-21-3e, sd for csg. 1945 ft.

RICE COUNTY—Niggins & Steinbuble's Shurr 1, ne sw, 21-20-10w, dr 2380 ft.

McPHERSON COUNTY—Slick-Pryor & Lockhart's Gratten 1, c ne nw nw, 34-20-3w, dr 650 ft. McPherson's Reitz 1, nw se sw, 1-20-2w, ur 8-in csg, td 2780 ft. Tatlock et al's Meyer 1, c sw sw ne, 32-20-1w, ur 8-in cas 2760 ft.

MARION COUNTY—Skelly's Mehl 1, ne ne, 11-20-4e, dr 900 ft.

RUSH COUNTY—Danciger O. & G. Co.'s Pinonka 1, c ne sw ne, 17-19-17w, dr 3450 ft.

RICE COUNTY—Allison & Fitzwilliams' Poland 1, ne sw ne, 36-19-8w, cellar.

McPHERSON COUNTY — McPherson's Decker 1, c se, 11-19-2w, 2695 ft; Chindberg 1, c nw nw, 18-19-2w, dr 2160 ft.

MARION COUNTY—Moore et al's Miller 1, nec, 26-19-1e, ur 6-in cas, td 2866 ft. Empire's Scully 1, c sw ne ne, 28-19-2e, dr 2675 ft. General Utilities' Burkholder 1, csl n½ se, 8-19-3e, hfw 2903-20 to plug; Propp 1, c ne se sw, 8-19-4e, rig.

LANE COUNTY—Robinson et al's Dickerson 1, swc nw se, 11-18-27w, 8-in csg 2625 ft.

NESS COUNTY—E. W. Marland's Moses 1, ne se, 7-18-25w, rig. Barnsdall's Lauck 1, c sw, 35-18-21w, cmt 6-in cas 4221 ft, sub 112 bbls oil 108 bbls water.

RUSH COUNTY—Sinclair's Seur 1, c se nw nw, 8-18-17w, dr 2620 ft.

McPHERSON COUNTY—E. W. Marland's Swanson 1, c ne sw ne, 36-18-4w, ur. McPherson County Gas Co.'s Rasmussen 1, swc, 8-18-3w, 1180 ft.

MARION COUNTY—Meyer's Papp 1, sw ne, 10-18-2e, hfw 3062 ft, td 3111 ft d and a. Shell's Scully 1, nw ne, 34-18-2e, dr 140 ft. Cont'l & Prairie's Zirak 1, se sw, 3-18-3e, ur 6-in cas, hfw 2770-72.

RUSH COUNTY—Barnsdall's Brock 1, c se se, 21-17-17w, dr 2550 ft. Danciger's Windt 1, c sw se sw, 22-17-17w, dr 3104 ft. Wilcox O. & G. Co.'s Schwartz Roph 1, c ne nw sw, 27-17-17w, dr 3725 ft. Central Commercial's Brock 1, nec sw sw, 12-17-16w, spd and sd.

RUSSELL COUNTY—Gobel & Bending's Bartlett 1, c sw sw, 28-17-15w, sd 1190 ft.

ELLSWORTH COUNTY—Texas' Sherman 1, ne sw, 16-17-6w, rig.

LANE COUNTY—Blankenship Pet. Co.'s Shaeffer 1, nec ne, 24-16-28w, spd and sd.

SALINE COUNTY—M. Esty et al's Peterson 1, e ne, 6-16-5w, spd and sd. Boyle et al's Miller 1, swc se, 21-16-1w, dr 3080 ft.

DICKINSON COUNTY—Prairie's Morgan 1, nwc, 26-16-3e, dr 1400 ft. Milmac et al's Biehler 1, sw ne, 28-16-4e, dr 2083 ft. T. C. Johnson's Detweiler 1, swc ne nw, 32-16-4e, 2885 ft.

ELLIS COUNTY—Rush Oil Co.'s Gatewood 1, nw, 4-15-20w, dr 3395 ft. Finey & Weimer's Freeman 1, nw se se, 24-15-20w, spd and sd.

RUSSELL COUNTY—Prairie-Slick's Sellans 1, sw ne, 36-15-13w, sd 3300 ft.

SALINE COUNTY—Dixie's Muiri, csw se sw, 6-15-2w, ur 8-in cas 2672 ft.

DICKINSON COUNTY—Gress & Hawry's Henli 1, nec, 12-15-2e, rog.

MORRIS COUNTY—Hiatt et al's Blythe 1, nw ne, 35-15-5e, sd 2227 ft.

ELLIS COUNTY—T. C. Johnson's Robbins 1, sw nw, 15-14-16w, dr 2940 ft.

RUSSELL COUNTY—Allison & Fitzwilliams' Mahoney 1, nw se, 5-14-12w.

SALINE COUNTY—Kenning-Coastal Co.'s Beal 1, c, 23-14-5w, dr 3530 ft shale.

TREGO COUNTY—Central Commercial Oil Co.'s Ellis 1, ne sw ne, 20-13-21w, pumping 190 bbls oil.

ELLIS COUNTY—Phillips' Johnson 1, nw ne, 9-13-19w, dr 3470 ft.

ELLIS COUNTY—Brown's Gestner 1, nw sw nw, 13-13-18w, dr 3250 ft.

SALINE COUNTY — Kenning-Coastal's Hughes 1, cw½ ne nw, 20-13-4w, spd and sd.

WALLACE COUNTY—Menton & Entrye's Parker 1, c se nw sw, 8-12-41w, rig.

TREGO COUNTY—Day's Gugler 1, c sw ne ne, 36-12-21w, spd and sd, rig.

RUSSELL COUNTY—Phillips' Solback 1, se nw, 32-12-14w, top Oswald 2916 ft, hfw 3214 ur 6-in cas.

ELLIS COUNTY—Burger et al's Hadley 1, c sw sw nw, 20-11-17w, dr 1930 ft.

OTTAWA COUNTY—Day et al's Unknown 1, c ne nw sw, 2-11-21w, dr 875 ft.

GEARY COUNTY—Wright et al's Younkers 1, nwc ne, 17-11-5e, fsh td 2170 ft.

OSBORNE COUNTY—Jarvis' Jellison 1, sec, 13-10-15w, cmt cave, td 3390 ft.

OTTAWA COUNTY—Anderson et al's Bank 1, ne nw, 29-10-2w, dr 3690 ft.

ROOKS COUNTY—Prairie's Gick 1, c se, 22-9-18k, sd 3585 ft, top K. C. 3368 ft. Burford & Brimm's Toxa 1, ne sw se, 22-9-17w, spd and sd. Krueger et al's Steis 1, c nw se sw, 12-9-16w, spd and sd.

OSBORNE COUNTY—Empire's Crest 1, se ne, 30-9-14w, hfw 3743-74 ft, td 3775 ft, d and a.

GRAHAM COUNTY—Gulf Coast's Johnson 1, swc sw se, 27-8-15w, sd 3600 ft.

SHERMAN COUNTY—A. L. Hansen et al's Murray 1, ne se nw, 22-7-40w, sd 3035 ft.

OSBORNE COUNTY—Phillips' Grieve 1, nw se ne, 6-7-12w, rig.

RILEY COUNTY—Derby-Skow Bros.' Lundstrum 1, ne, 32-7-5e, machine.

OSBORNE COUNTY—Trees' Payenter 1, c ne se se, 22-6-15w, set 8-in cas 2155 ft. Mid-Kansas' Boyce 1, se nw, 8-6-13w.

RILEY COUNTY—Gray et al's Smith 1, ne se, 30-6-6e, dr 945 ft.

SMITH COUNTY—Phillips' Clydesdale 1, se nw, 23-5-14w, rig.

WASHINGTON COUNTY—McCool & Vincent's Linn 1, nw ne, 27-4-3e, dr 2020 ft.

MARSHALL COUNTY—Idwin et al's Cooper 1, ne nw, 10-3-7e, sd 2020 ft.

PHILLIPS COUNTY—Watsonian & British American's Weiman 1, c sw sw, 34-2-19w, sd 2390 ft.

SMITH COUNTY—Mid-Kansas' Lambert 1, nuec, 4-2s-13w, dr 3998 ft.

OKLAHOMA

GRANT COUNTY—T 28n, R 3w, Sec. 24, Consolidated Gas Ut. Co. et al's Conneil 1, nw, hfw 4435 ft, dr 4750 ft.

ALFALFA COUNTY—T 27n, R 11w, Sec.

ABBREVIATIONS

NOTE—The following is the explanation of abreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

12, Smith Bros.' Ferbes 1, ne se nw nw, sd 310 ft.

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair's Share 1, c ne sw, dr 3210 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent & Nat'l Union's McNeal 1, nwc ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft, litigation.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu Vi Bar et al's 1, sec sw, show gas 5003-19 ft, hfw 5005-19 ft, ur 6-in at 5038 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Bollmer 2, nec se ne sw, lost tools 5640 ft.

WOODWARD COUNTY—T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

WOODS COUNTY—T 24n, R 13w, Sec. 18, Miller et al's Copenhaver 1, nwc, spudded and sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, Washoma Oil Co.'s Acre 1, swc ne, rig.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, dr 4850 ft.

WOODWARD COUNTY—T 23n, R 20w, Sec. 9, Billy Oil Co.'s Wyatt 1, c se, sd 3690 ft.; T 23n, R 17w, Sec. 2, John Farran's Belva 2, csl sw se, sd 1387 ft.

MAJOR COUNTY—T 23n, R 16w, Sec. 4, Wilson et al's Creech 1, nec, sd 3025 ft, rig down; T 21n, R 19w, Sec. 15, Burgoyne Bros.' Merklin 1, swc se ne, sd 1910 ft.

MAJOR COUNTY—T 20n, R 14w, Sec. 23, Keller et al's Horton 1, c ne ne, spudded and sd.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, dr 1365 ft.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckleby & McCoy's Perfect 1, ne c, sd 4500 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy & Consolidated Drlg. Co.'s Quier 1, sec sw, sd 3970 ft.

KINGFISHER COUNTY—T 16n, R 6w, Sec. 27, Crawford & McKenna's Sturgeon 1, nec sw, sd 4895 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spears's Piatt 1, swc nw, sd 3223 ft.

CIMARRON COUNTY—T 5n, R 5, E. C. M., Sec. 22, Magnolia's School Land 1, c se ne, cmtg 8-in at 3944 ft.

TEXAS COUNTY—T 1n, R 15 E. C. M., Sec. 25, Skaer et al's Hitch 1, nwc, sd 250 ft.

OSAGE COUNTY—T 26n- R 7e, Sec. 13, Wrightsman Pet. Co. 1, sec nw, dr 1600 ft.

CREEK COUNTY—T 19n, R 8e, Sec. 35, Murphy Oil Co.'s Lapham 1, swc ne sw, dr 3050 ft.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, top wx 4616 ft; T 16n, R 5e, Sec. 19, T. P. C. & O. Co.'s Seabo 1, nwc, top sand 4533 ft, dr 4541 ft in sand; T 16n, R 6e, Sec. 19, Flynn & Morgan's Finley 1, swc, dr 2225 ft; T 14n, R 6e, Sec. 33, Magnolia Pet. Co.'s Mitchell 1, nec, ur 6-in cas at 3400 ft; T 12n, R 3e, Sec. 29, Phillips Pet. Co.'s Roberson 1, sec nw, rig.

OKFUSKEE COUNTY—T 12n, R 7e, Sec. 29, Barnsdall's Soweka 1, nec sw, wx 4843-55 ft, pb to 3935-50 ft show oil and water.

McINTOSH—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, spudded and sd.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, sec nw se, 3M gas 1325-90 ft, 2 M gas 1890-95 ft, 3 M gas 4472-4525 ft, 3 M gas 4613-35 ft, Wilcox 5443 to 5496 ft, small show oil 5446-70 ft, 1 M gas at 5464 and 5480 ft, sand 5556-59 ft, shot 240 qts, shot went off up the hole .

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, sd 2692 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, 1½ M gas 2518-30 ft, sd 3950 ft show gas.

OKLAHOMA COUNTY—T 12n, R 2w, Sec. 30, Magnolia, Noble 1, nwc sw sw, dr 5740 ft. T 12n, R 1w, Sec. 19, Mid-Kansas & Ramsey, Trosper 1, nec nw dr 4713 ft.

OKFUSKEE COUNTY—T 11n, R 7e, Sec. 6, Superior et al, Carolina 1, Sec, lcn.

SEMINOLE COUNTY—T 10n, R 7e, Sec. 20, Gypsy, Harjo 1, nwc ne ne, dr 3400 ft.

POTTAWATOMIE COUNTY—T 8n, R 5e, Sec. 33, Phillips & Furhman, Raper 1, swc se, dr 3795 ft.

SEMINOLE COUNTY—T 8n, R 7e, Sec. 4, Magnolia Pet. Co., Reed 1, nec sw, td 3419 ft. co.

HUGHES COUNTY—T 8n, R 11e, Sec. 25, McGee Bros., Smith 1, sec sw, dr 2965 ft, 2 mil ft gas.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner Oil Co., Vandeveer 1, nec nw sw, sd 3120 ft.

SEMINOLE COUNTY—T 6n, R 5e, Sec. 11, McCulloch, Powell 1, nwc, cemtg 8-inch 4335 ft. T 6n, R 7e, Sec. 9, Gypsy Oil Co., Thomas 1, Sec. nw, dr 4038 ft. Sec. 34, Magnolia, Harjo 1, nec se, dr 4716 ft, hfw. T 6n, R 8e, Sec. 9, The Texas Co., Bryant 1, sec ne sw, setg 6-inch 3296 ft. T 5n, R 7e, Sec. 3, I. T. I. O. et al, Factor 1, swc ne se, cemtg 8-inch 4284 ft.

HUGHES COUNTY—T 5n, R 9e, Sec. 17, E. W. Whitney, Huddleston 1, sec sw, ur 5-inch 3910 ft.

PONTOTOC COUNTY—T 4n, R 8e, Sec. 23, Independent, Hampton 1, nec, dr 2835 ft.

PITTSBURG COUNTY—T 4n, R 12e, Sec. 32, Kerr & Key, Tall 1, c n wnw, fsh 1805 ft.

COAL COUNTY—T 2n, R 8e, Sec. 6, J. S. Cosden, Richardson 1, nwc ne ne, drlg 2530 ft. Sec. 7, McGinley & Sigler, Wiltsey 1, nwc se se, rur. Sec. 10, E. W. Whitney, Miller 1, sec ne, sd 202 ft. T 1n, R 11e, Sec. 10, I. T. I. O., Cook 1a, sec sw nw, dr 7340 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt, Wellman 1, c se, sd 100 ft.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Bucy & Stone, Williams 1, c sw, lcn. T 11n, R 26w, Sec. 4, L. C. Hivick, Davis 1, c n wne, sd 700 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J .V. Bailey, Robinson 1, c ne nw, sd 150 ft.

BECKHAM COUNTY—T 8n, R 25w, Sec. 30, Benedum-Trees Oil Co., Rogers 1, swc, dr 2260 ft. T 8n, R 22w, Sec. 20, Carson et al, Denby 1, swc se ne, dr 1526 ft.

GREER COUNTY—T 6n, R 24w, Sec. 17, I. T. I. O. et al, Fee 1, c ne, dr 1720 ft.

CADDO COUNTY—T 6n, R 10w, Sec. 26, English Drlg. Co., Gardner 1, nwc sw, sd 3465 ft.

HARMON COUNTY—T 4n, R 26w, Sec. 8, S. M. Stauffer, Castleman 1, nwc se, dr 60 ft.

STEPHENS COUNTY—T 2n, R 8w, Sec. 27, Smythe et al, Shaw 1, c ne ne, sd 1763 ft.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, Houseman et al, Northington 1, nec, sd 2020 ft.

TILLMAN COUNTY—T 1n, R 17w, Sec. 13, Allen Bros., Howell 1, nwc se, show oil 599 ft, sd 826 ft. T 1s, R 18w, Sec. 25, Wirt Franklin, Zweig 1, c nw, dr 3274 ft.

COTTON COUNTY—T 1s, R 11w, Sec. 24, Bridwell et al, Crow 1, sec sw sw, sd 1626 ft.

STEPHENS COUNTY—T 3s, R 7w, Sec. 4, Ellis Drlg. Co., Yates 1, swc ne, dr 2156 ft. T 3s, R 6w, Sec. 4, Carter et ad, Woolsey 1, sec sw ne, lcn.

TILLMAN COUNTY—T 4s, R 14w, Sec. 16, Ridgeway et al, Barnes 1, nwc ne, lcn.

COTTON COUNTY—T 4s, R 9w, Sec. 31, Amerada Pet. Corp., De Lana 1, sec nw nw, dr 2409 ft.

JEFFERSON COUNTY—T 5s, R 8w, Sec. 16, Pearce & Brown, School 1, sec ne nw, dry and abandoned at 3001 ft, td. T 5s, R 7w, Sec. 35, Amerada Pet. et al, Majors 1, sec nw nw, lcn.

GARVIN COUNTY—T 3n, R 3w, Sec. 36, Gilcrease-Douglas Oil Co., Barnett 1, sec nw ne, dry and abn, 4697 ft td.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee, Wolfe 1, nwc sd 2275 ft.

JOHNSON COUNTY—T 1s, R 7e, Sec. 29, Smith-Kinsley, Lane 1, sec nw, co 2091 ft.

CARTER COUNTY—T 4s, R 1e, Sec. 32, Leonard Woodruff, Zellner 1, nwc sw ne, dr 630 ft. T 4s, R 2e, Sec. 32, Tex.-Okla. Drlg. Co., Anderson 1, sec ne se, sd 420 ft.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. G. Endicott et al, Craige 1, c nw ne, sd 1390 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec. 8, Phillips, Prairie & Slick, Sudik 1, c ne ne, dr 6424 ft.

WOODWARD COUNTY—T 23n, R 17w, Sec. 23, Transcontinental & Prairie, Wilbur 1, nec dr 4300 ft.

OKFUSKEE COUNTY—T 11n, R 9e, Sec. 2, Producers & Refiners, Palmer 1, nwc ne, dry and aban at 4035 ft hfw.

SOUTHERN CALIFORNIA

BELVEDERE—Prairie O&G Co.'s Taylor 1, 32-1-12, dr shale and sand 2020 ft.

CHATSWORTH—Russell Pet. Co.'s Joughin 2, 23-3-17, 10-inch cas cmt 49 0ft.

CLEARWATER—The Texas Co.'s Montana Land Co. 1, 8-4-12, rigging up rotary.

FULLERTON—Shell Oil Co.'s Bastanchury 1, 28-35-10, dr sand 3035 ft.

HAWTHORNE—Standard's Freeman 1, 5-3-14, dr hard shale 5040 ft.

MONTEREY PARK — Monterey Park Pet. Co.'s Jepson 1, 25-1-12, dr brown shale 4050 ft.

NEWHALL—P. B. Anderson's 1, 1-3-16, fsh for dr pipe 306 ft. Southern California Drilling Co.'s Needham 1, rigging up rotary.

NEWPORT—Mesa Pet. Corp.'s B. A. 1, 16-6-10, dr gray sand 4465 ft.

PIRU—Pico Dome Oil Co.'s 1, 14-3-16, 10-inch cas will cmt at 650 ft.

POMONA—Pomona Oil Assn.'s 1, 32-1-8, dr gray sand 1150 ft.

PUENTE—Brea Canyon Dev. Co.'s Bierd 1, 30-2-9, dr shale 240 ft. R. C. Rucker's Grazide 1, 27-2-10, dr hard sand 5550 ft.

RICHFIELD—Western Drilling and Producing Co.'s Day 1, 21-3-9, dr hard shale 4966 ft.

REDONDO—Allied Pet. Corp.'s 1, 28-3-15, 5544 ft.

ROSECRANS—Burlingame Pet. Co.'s Hamm 1, 10-inch cas cemt 1140 ft, td 2175 ft. Lee and Brainerd's Owens 1, near 128th St. and Central Ave., new lcn.

TELEGRAPH CANYON — Union's Rimpau 1, 13-3-9, rigging rotary.

WHITTIER—R. W. Jackson's Flory 1, 8¼-inch cas cmt 1100 ft, td 1450 ft.

RIVERSIDE COUNTY — Hall Pet. Co.'s Watt 1, sd 925 ft. Hemet Pet. Co.'s Ward 1, dr hard shale 3266 ft. Trabuca Oil Co.'s 1, dr white sand 3830 ft.

SAN BERNARDINO COUNTY—Urmi Oil Co.'s S-Z 1, ready to sp.

NORTHERN CALIFORNIA

KERN COUNTY

BAKERSFIELD — Taft Well Drilling Co.'s Delfino 1, 2-30-27, dr hard sand 1550 ft.

BELRIDGE—Elkorn Oil Co.'s 1, 20-28-20, co 900 ft, td 1000 ft. Ventura-Pacific Oil Co.'s 1, 18-29-22, changing to rotary, td 3375 ft.

BENA—Elmer Oil Co.'s 1, 15-30-30, dr shale 2555 ft.

BUTTONWILLOW—Richfield's Redding 1, 36-27-23, dr shale 7148 ft.

GOULD HILLS—Elmer Oil Co.'s 1, 2-29-20, dr shale 2933 ft. J. H. Kennedy's 1, 5-29-21, rigging up rotary. K. C. Wallace's 1, 32-29-21, dr brown shale 920 ft.

KERN RIVER—Gatton and Gould's 1, dr sand and shale 1460 ft. Richfield's Boston 1, 20-28-28, dr hard sand 4508 ft.

LERDO — Shell's Ansolabehere 1, 5-29-27, 11¾-inch cas cmt 3725 ft, td 3765 ft.

LOST HILLS—The Texas Co.'s Gatchell 1, 7-25-20, new lcn.

McFARLAND—General Pet. Corp.'s KCL-1, 25-26-26, gas showings 5400-5420 ft.

ROSEDALE—Elmer Oil Co.'s 1, 33-29-26, fsh for dr pipe 2750 ft.

SHALE HILLS—Day Oil Co.'s 1-A, dr shale 562 ft.

SAN EMIDIO—Union's KCL-2, 5-10-21, dr shale 3600 ft.

TEMBLOR — George F. Getty's Phelps 1, 29-31-22, dr hard brown shale 2800 ft. Union's Williams 1, 22-32-23, dr shale 1000 ft.

SANTA BARBARA COUNTY

BETTERAVIA—Shell's U. S. 3-A, 36-10-35, dr 1915 ft; U. S. 4-A, coring 1700 ft.

BUELL CANYON — Union's Buell 1, dr brown shale 1605 ft.

CARPENTERIA — Continental's Ballard 1, dr sandy shale 3434 ft.

GOLETA—F. G. Anderson's Langman 1, coring sand 4460 ft. General Petroleum's More 1, 21-4-28, dr hard shale 3750 ft. Padre Oil Co.'s Dos Pueblos 1, 8-4-29, dr 3160 ft. Petroleum Securities' Bishop 1, dr shale 2966 ft.

NAPLES—Pacific Western's Wiley Ranch 1, 7-4-29, dr brown shale 2375 ft.

ORELLA—Shell's Rutherford 1, 36-5-31, dr shale 4275 ft.

POINT CONCEPCION—Western Gulf Oil Co.'s Hollister 1, 10¾-inch cas cmt 3090 ft, will make production test, td 3115 ft.

SANTA MARIA—System Oil Co.'s Bradley 1, 36-10-34, dr shale 2820 ft.

SUMMERLAND—George F. Getty's Becker 2, 23-4-26, new lcn. Lincoln Drilling Co.'s Williams 1, 32-4-16, dr 650 ft.

SURF—Gaviota Oil Co.'s Moretti 1, new lcn.

ORDER THIS SUPERIOR BUFFALO SUCKER ROD

—And if you don't get service plus, you will not owe us a cent. We are willing to let Buffalo Rods sell themselves to you. A trial order will convince you of the superiority of this Sucker Rod. Send us your trial order today.

Buffalo Rods Are Economical

Because they last longer. They will give you more uninterrupted service, and soon pay for themselves in this extra and trouble-free service. Millions of feet of these rods are in service. They have been endorsed by operators everywhere. No obligation incurred by sending us inquiry.

Inquiries from Supply Dealers Invited

BUFFALO BOLT COMPANY
NORTH TONAWANDA, N. Y.

SALES OFFICES
Monadnock Bldg., Chicago, Illinois
General Motors Bldg., Detroit, Michigan

FIDELITY

An element built into every product manufactured by The Garlock Packing Company

GARLOCK-26 is produced with careful observance of all the rules and obligations of flax packing manufacturing principles, so as to furnish the consumer a commodity that is constant in its quality.

This packing is manufactured from long fibre European rovings, tested as to strength and cured, treated and graded by approved methods. The fibres are braided by special designed machinery so that the density of the product is always the same. The lubricant is compounded to a given formula and thoroughly impregnates the packing.

GARLOCK-26 is the highest grade flax packing that can be procured. It will give satisfactory and extremely economical service on severe hydraulic duty and all cold water conditions.

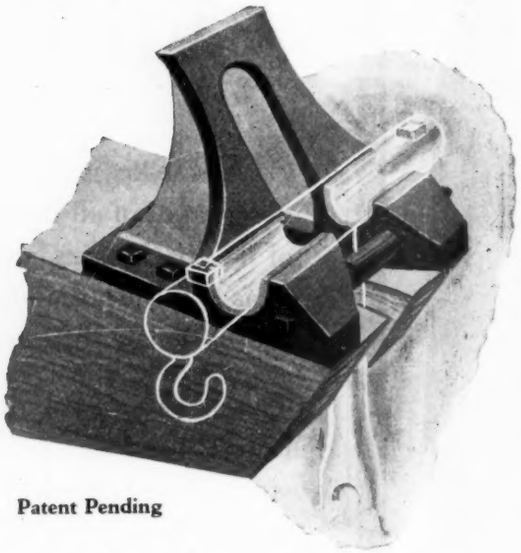
The Garlock Packing Company
Manufacturers of Mechanical Packings
Palmyra, N. Y., U. S. A.

BURNS—*A Name That Has Always Stood for Highest Quality*

Ball retaining type washer keeps ball in place

From the deepest well in the world

to wells all over the world, Burns Tubular Temper Screws have established their reputation for quality, ease of operation and long life. When installing repair parts be sure they are the genuine Burns quality.



Patent Pending

The same BURNS
Quality in a new product

THE BURNS BEAM BEARING

for Temper Screws, saves the beam and makes unnecessary the practice of *half-soling*, or nailing a block of hardwood to the beam head. A *Safety first* device as it is impossible for Temper Screw to jump out.

No working parts, nothing to get out of order. Babbitt bearings prevent wear on the temper screw head. For sale by your Supply Store, write for prices.

BURNS *Tool Company*
OKMULGEE - OKLAHOMA

Keystone Petroleum Co.'s True Ranch 1, ready to spud.

VENTURA COUNTY

CASITAS—Miley Oil Co.'s 2-A, 7-3-23, dr blue sand 1450 ft.

CONEJO—American Oil Co.'s 1, 33-2-20, sd 1200 ft. Triunfo Oil Co.'s 1, 24-1-19, sd 1300 ft.

FILLMORE—Frank Oil Co.'s 1, co 1775 ft.

OJAI—California-Ventura Oil Co.'s LaCrosse 1, dr shale 1832 ft. Continental's 3, 21-4-22, dr shell 536 ft.

PIRU—Bolsa Chica Oil Co.'s Snow 1, 4-4-18, dr shale 325 ft. Pacific Western's Tehmescal 5, 3-4-28, dr gray sand and shale 4282 ft.

SANTA PAULA—W. W. Bryant's Anlauf 3, 21-4-21, co 1150 ft. Empire Oil Co.'s 4, 13-4-21, testing water shutoff, td 960 ft. San Pedro-Pt. Fermin Synd.'s 1, 13-4-21, testing cas 900 ft.

SATICOY—Standard's Citrus 1, 10-2-22, dr brown shale 6880 ft.

SESPE—H. A. Ivers' 11, 1-4-20, new lcn.

SIMI—Shell's Marr 1, 31-3-17, re-dr 2450 ft.

VENTURA—Federal's Sexton 1, dr brown shale 4040 ft.

MISCELLANEOUS

FRESNO COUNTY—Currency Pet. Co.'s 1, 28-21-14, dr shale 2220 ft; No. 2, 14-21-14, dr shale 200 ft. Fresno-Madera Synd.'s 1, 18-12-21, fsh for bit 4200 ft. Hornaday and Huggins' 1, 32-14-28, co 3700 ft. Oceanside Oil Co.'s Thomas 1, 32-22-16, fsh for cas 750 ft. Shell's BLC-A, 24-19-28, coring 830 ft; BLC-B, 26-19-28, coring 300 ft; BLC-C, 27-19-18, rigging up; BLC-D, 17-19-29, rig.

KINGS COUNTY—J. E. O'Connell's 1, 7-23-20, new lcn.

MENDOCINO COUNTY—C. H. Braden's 1, 19-23-15, rigging up cable outfit. Marland's Naciemento 1, 32-24-11, dr gray sand 5930 ft. Shell's Dudley 1, 15-22-9, sr 3030 ft. Union's Paige 1, 8-22-8, dr shale 833 ft.

SAN LUIS OBISPO COUNTY—Midwest Refining Co.'s Porter 1, 34-31-15, rigging up cable tools. Painted Hills Oil Co.'s Pecho 1, 34-30-10, co 2000 ft. Panorama Oil Co.'s 1, 7-31-21, dr shell and sand 3888 ft. Paso Robles Oil Co.'s Emerick 1, 27-27-11, dr shale 1628 ft. Primo Oil Co.'s Pricco 2, 5-23-13, rigging up. Union's Russ 1, re-dr 3693 ft; Chandler 1, dr out cmt plug, td 3480 ft.

COLORADO

ARCHULETA—Juanita Oil Co., Harvey 1, sw 4-32n-3w, stand 725 ft.

BENT—Marland Oil Co., Pipe Springs 1, se 27-29-49, dr 4210 ft.

DOLORES—Transcontinental, Glade 1, nw 30-41-16, resume 4005 ft.

ELBERT—Progressive O. & L. Co., Pease 1, sw 27-10-69, lcn. Belmont Oil Co., Maher 1, sw 4-6s-59w, dr 3460 ft.

JACKSON—Midwest, nw 9-6-8, dr 330 ft. P. & R., Hendershot 1, 2-6-81, cem 1900 ft.

JEFFERSON—Ruby Hill O&G Co., Braden 1, se 14-4s-69w, cas at 3170 ft.

LAS ANIMAS—Parker Club & Kinney-Coastal, 4-28-68, sd 3016 ft.

LARIMER — Barrows et al., 7-11s-68w, sd 2000 ft. Five Square O&G Co., State 1A, sw 16-4n-69w, show oil and gas at 3750 ft.

LA PLATA—Royal P. & R. Red Mesa 1, 27-33-12, ready to resume at 567 ft.

LINCOLN—Kelly Oil Co., State 1, ne 36-14-57, resume 1900 ft.

MESA—High Line Oil Co., Hoel 1, ne 23-8s-104, sd 2712 ft.

MOFFAT—McLaughlin et al., Wms. 1, 2-3-91, dr 3660 ft. McCormick et al., Sales 1, se 28-4n-92, sd 105 ft for repairs.

MONTROSE—Uncompaghre O&G Co., Colorado Title & Trust 1, 27-50-10, dr 2031 ft.

PUEBLO—Beulah Dome Oil Co., Hedland 1, sw 7-23-67, dr 220 ft. Boone O. & G. Co., Ritter 1, nw 33-18-60, fsh 3025 ft.

RIO BLANCO—White Eagle, Fordham 1A, sw 9-2-96, dr 980 ft. Texas Prod., Potter 1, sw 30-2n-96w, spudding 50 ft.

ROUTT—Midwest, 10, nw 4-7-86, lcn.

YUMA—Major Pete, Black Wolf 1A, sw 7-2-43, dr 1215 ft. Phillips, Andrews 1, nw 3-2-42, dr 900 ft.

WELD—Platte Valley Pete Corp., Platterson 1, sw 23-8n-61w, ce mcave 4335 ft.

[Assembly shop and riveting floor showing 25 ton crane]

Keeping Pace With The Oil Industry

With modern plants of large capacity in both Dallas and Houston and with competent engineers familiar with the requirements of the oil industry, the Wyatt Metal & Boiler Works is keeping pace with oil industry progress. Your orders can be safely entrusted to Wyatt.

WYATT METAL & BOILER WORKS

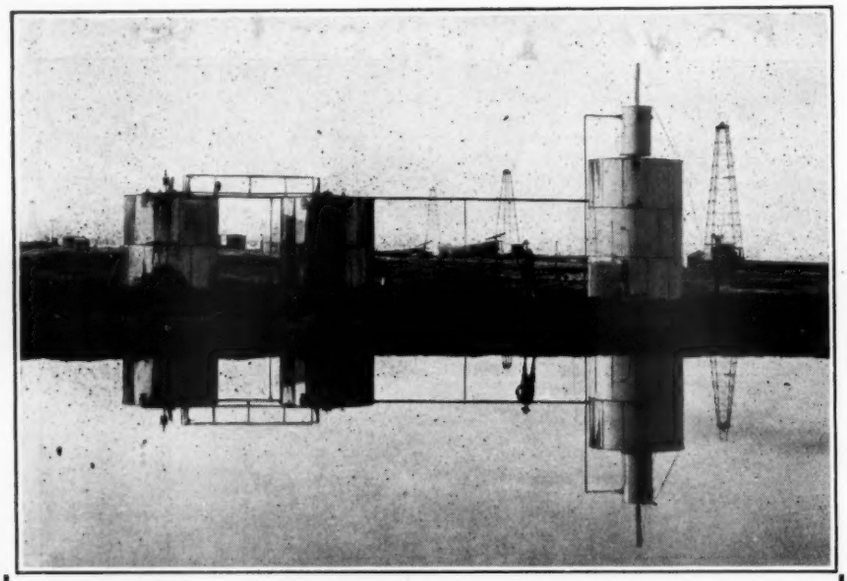
Capital $1,000,000

DALLAS, · HOUSTON

Wyatt's

WYATT

METAL & BOILER WORKS



Two 500 bbl. MALONEYS and one 750 bbl. MALONEY Tank, Southern Crude Oil Purchasing Co., Westbrook Lease, Wink, Texas.

Maloneys Afford SAFE Storage

Operators have found by experience that MALONEYS afford *safe* storage because they can be depended upon to hold the lighter petroleum products without danger from evaporation.

This vapor-tightness is a direct result of our patented crimped seam and joint construction which secures close fit of parts. Our superior gasketing, our Gaso cement and our method of reinforcing all seams, including deck seams, with rigid steel channels, further contribute to lasting tightness.

"Alone in Quality"

MALONEY TANK MFG. CO.

TULSA, OKLA., U. S. A.

Distributers at All Principal Petroleum Points

Sizes: 12 to 10,000 Barrels

Packed in Steel-Bound Crates for Export

Howell Aluminum "4-in-1" Vacuum Pressure Valve and Thief Hatch— The BEST and LATEST Deck Equipment—POSITIVE Safety

MADE OF KEYSTONE COPPER STEEL — MALONEY PATENTED BOLTED COPPER-STEEL TANKS — MADE OF KEYSTONE COPPER STEEL

MALONEY ALONE!

NEW MEXICO

CHAVES—R. T. Neal et al., Russell 1, 31-14-25e, sd 1385 ft. Warman et al, 1, sw 23-13-24, sd. Tannehill et al, Butler 1, se 15-21-24, abn 1067 ft. Transcontinental's Robbings 1, 1-14s-28e, cem 4200 ft.

DE BACA—Matador Oil Co., State 1, sw 6-4n-20e, wait cas 2135 ft. Pittsburg Oil Co., 1, ne 16-1s-27e, sd 4506 ft. Transcontinental, McWhorter 1, 6-35-22e, dr 4280 ft.

GUADALUPE—Hanchett Oil Co., 2, 14-8n-24e, tools lost, sd 2403 ft.

LEA—Midwest, Lane 31, sw 28-19-30, cem 12½-inch at 1352 ft. Midwest, Capps 31, sw 3-19-38, cem 10-inch at 2790 ft. Midwest, Farnsworth 19, sw 12-26-37, stand 4115 ft. Midwest, Gregory 22, sw 31-25-37, dr 2910 ft. Gypsy Oil Co., Mattern 1, 24-21-36, show gas 3620 ft. Gypsy, Humphreys 1, sw 25-24-36, dr 1900 ft. Exploration Co., Record 1, 26-19-35, td 4556 ft. Morton et al., State 1, ne 32-11-38, fsh 1700 ft. Texas, Sheppard 1, ne 6-26-37e, sd 3230 ft. Texas, Moberly 1, se 17-26-37, co 3542 ft. Texas, Humphreys 1, sw 18-20-32, dr 2610 ft. Cranfill & Reynolds, Meyer 1, sw 22-24-36, dr 1600 ft. Pueblo Oil Co., Scott 1, se 29-25s-37e, dr 3100 ft. Curtis Drlg. Co., Nixon 1, 22-18-24, sd 1200 ft. Empire Gas & Fuel Co., State 2B, se 8-21-35, sulphur water at 3900 ft. Empire Gas & Fuel Co., Closson 1, se 6-22-36, dr 1760 ft. Texas Pacific Coal & Oil, State 1, sw 22-23-35, plug back to 3830 ft. Henderson et al, McDonald 1, se 19-20-34, tested at 3594 ft. Vacuum Oil Co., 1, 14-17-34, tubing to test at 4720 ft. Bordages et al., Hughes 1, 27-19-38, cas trouble 4012 ft, 300 ft oil in hole. Pueblo Oil Co., Scott 1, se 29-25-37, stand 3120 ft. Pueblo Oil Co., Lee 1, ne 34-17-29, dr 1105 ft. Ohio Oil Co., Price 1, 7-19-39, rigged. Ohio Oil Co., State 1, 9-13-38, rig. Empire-Henderson et al, Martin 1, ne 28-20s-33e, dr 2500 ft. Buell & Hagen, State 1, ne 13-11s-35e, dr 1455 ft. Marland, Flint 1, se 29-20s-34e, dr 1365 ft. Marland, McCallister 1, se 24-26-36, dr 430 ft. Shell Pete Corp., Terry 1, ne 22-19s-38e, dr 1320 ft. Humble O. & R. Co., Lindley 1, 23-25-36, dr 160 ft.

McKINLEY—J. W. Halsell, Santa Fe 1, 17-19-9, dr 1837 ft. San Juan Coal & Oil Co., 1, se 27-18n-9w, dr 1820 ft.

ROOSEVELT—J. T. Keegan et al, Pepper 1, 6-1s-36e, ready to spud. Smith & Sloan, Lovern 1, se 4-3s-35, dr 1900 ft.

RIO ARRIBA—Berringer et al, Hartman 1, ne 8-29-7, try shut off water at 577 ft.

SAN JUAN—Continental Oil Co., Munoz 17, 2-29-19, flow water and 700 bbls at at 6771 ft. Dorothy Oil Co., 29-30-9, 10-inch parted, may skid rig, td 635 ft. Kutz Canon O. & G. Co., Day 1, 20-28-10, ur 731 ft. Blackrock Oil Co., 1, sw 11-25-13, sd 1550 ft. Iowa Oil Synd., Viles 1, 28-29-11, sd 694 ft. Angel Peak Oil Co., Kutz Canon 1, 11-28n-11w, built rig, 3100 ft. Greathouse et al, Roderick 1, sw 11-22-14, dr 655 ft. Milwaukee-N. M. Synd., Beardsley 1, 30-38-11, stand 1890 ft, may abandon. Childers Dr. & Pr. Co., Westwater 2, nw 24-31-18, water trouble 2525 ft. Reserve Oil Co., Shaffer 2, ne 1-21-14, dr 770 ft.

SAN MIGUEL—Pioneer O. & G. Co., Thunderbird 1, nw 14-15-16, cem 1875 ft. Starr Oil Co., Adams 1, ne 25-17-16, td 660 ft.

SOCORRO—Arnold et al, 2, ne 13-6-1, sd 1975 ft.

TORRANCE—Bluhall O. & G. Co., 20-6-10, stand 1800 ft. Sinnoc 1 et al., Kutchin 1, ne 13-7-7, td 197 ft, crooked hole. Williams et al, Staplin 1, ne 16-8n-10e, prep to spud.

VALENCIA—Rio Puerco Oil Co., N. M.-Ariz. Land Co., 2, nw 13-6-2, wait pipe 3145 ft. Acme Oil Co., N. M.-Ariz. Land Co. 1, 26-6-3, stand cem 3670 ft.

MONTANA

BROADWATER—Swoboda et al, 1, 36-7n-2e, dr. Signal Hill O. & G. Co., nw 7-3n-1e, dr 2100 ft.

CARBON—Ohio Oil Co., Northern Pacific 2, 11-7s-21e, dr 2100 ft.

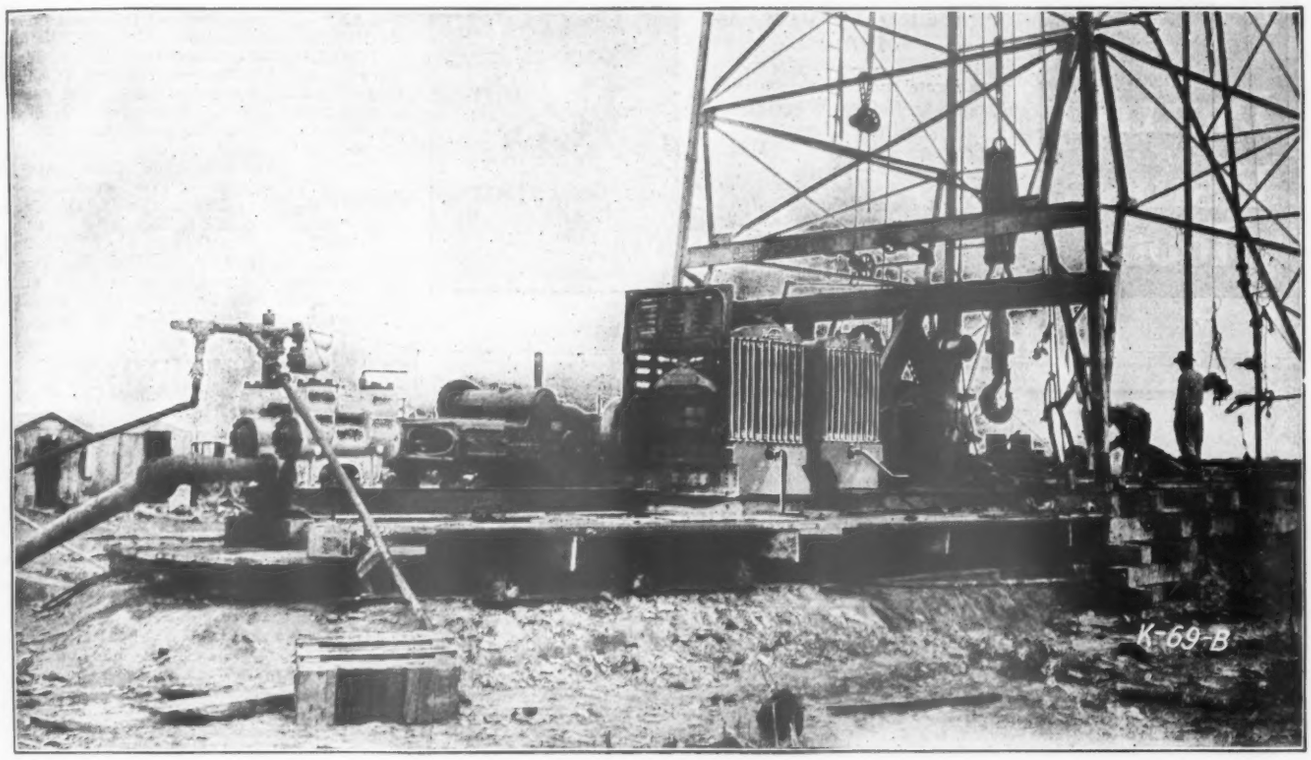
CASCADE—U. S. Pete Co., Miller 1, 8-21-4w, ready to test show at 1100 ft. Lone Star, 13-21-3e, tools recovered.

CHOTEAU—California Synd., Walker 1, ne 18-23-6e, dr below 800 ft.

GALLATIN—California Co., Ringling 1, 35-5n-7e, fsh collapsed cas at 1038 ft.

GLACIER—Jos. Drumheller, et al, Yunck 1, dr 350 ft.

Reliability and Lower Drilling Costs ~



the reasons for the exclusive use of W-S long stroke slush pumps on all deep drilling of an entire Texas field!

Every pump thoroughly tested with high pressures before shipment

WILSON-SNYDER

BUILDERS OF HEAVY DUTY PUMPS FOR OVER FIFTY YEARS

PITTSBURGH, PA U.S.A.

ACME DRILLING & FISHING TOOLS
SEAL OF QUALITY
DRILLING AND FISHING TOOLS

Acme Points to Experience

Experience Points to Acme

Investigate the new Acme Non-Fouling Safety Wire Line Drilling Clamp
LINK

Best Link Being Used

EXPORT OFFICE
136 LIBERTY ST., NEW YORK CITY

Manufactured by
ACME FISHING TOOL CO.
Parkersburg, W.Va.
ESTABLISHED 1900

NATIONAL PETROLEUM ENGINEERING COMPANY
Engineers & Geologists
TULSA, OKLAHOMA

APPRAISALS
REPORTS-COMMERCIAL & TAX

SURVEYS
ESTIMATES OF OIL RESERVES

AN EXPERIENCED OIL FIELD ORGANIZATION

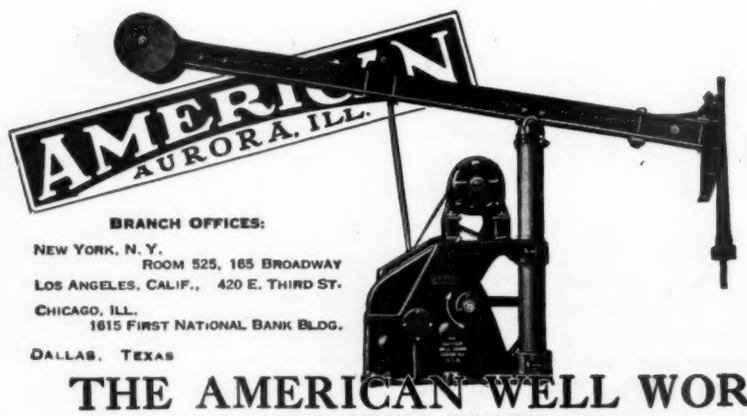
TUBE—TURNS
A New Process Fitting for Welded Piping

Where piping is concerned tube-turns may be used to good advantage and we urge you to consider their use.

Shipments From Houston Stock

Sectional Cut of 6" 180°
Standard "Tube Turn," 9" Radius
Note Uniform Wall Thickness

Maintenance Engineering Corp.
1400 Conti St. Preston 2274-5
HOUSTON, TEXAS



BRANCH OFFICES:
NEW YORK, N. Y.
ROOM 525, 165 BROADWAY
LOS ANGELES, CALIF., 420 E. THIRD ST.
CHICAGO, ILL.
1615 FIRST NATIONAL BANK BLDG.
DALLAS, TEXAS

THE AMERICAN WELL WORKS
General Offices AURORA, ILLINOIS and Factory

HILL—A. H. Perkins, Brown's Coulee 1, nw 32-34-14e, rig.

LIBERTY—Sunburst O. & R. Co., Bear's Den 1, nw 17-36-6e, reaming at 2410 ft. Square Deal Pete Co., Johnson 1, se 1-32-7e, fsh 3365 ft. Western Natural Gas Co., Morrison 1, 5-37-4e, dr 2112 ft. Cypress Pete Co., 36-28-6e, run cas 2695 ft.

LAKE—Missoula-Flathead Oil Pools Co., nw 31-21-20, making repairs.

PHILLIPS—Big Dome O. & G. Co., Bloomberg 1, ne 1-32n-32e, run cas 2455 ft. E. V. Bethel, 2-24-23, moving in.

PONDERA—Miller Bros., Bruins 1, nw 17-28-1w, rig up. Tom Robinson, Mere 1, 2-28-3w, dr 2965 ft.

SWEETGRASS—Shoshone Consolidated, 1, 23-2n-15e, dr 4600 ft, oil show increasing.

TETON—Texas Pacific Coal & Oil Co., se 15-25-1w, dr 1100 ft.

TOOLE—Monalta Oil Co., Ltd., No. 1 Buckley, se¼ Sec. 1-37-4w, dr 1100 ft. Wm. J. Mahan et al, Mangnell 1, nw 32-34-14e, dr 150 ft. Anaconda Pete Co., ne 19-36-2e, dr 350 ft. J. H. Adams, Keil 1, 29-29-1w, rig up.

WYOMING

ALBANY—Midwest Refining Co., Diamond Anticline, se 6-20-77, moving in.

BIG HORN—P. & R. Hill, 7-57-97, sd 597 ft. P. & R. Corp., Rand 1, 7-57-97, wait packer 2185 ft. P. & R. 3, 24-56-98, dr 3185 ft. Ohio Oil Co., Easton 1, 36-56-97, dr 1851 ft.

CARBON—P. & R. 2-19-88, dr on iron 3924 ft, td 4003 ft. C. E. Bivins et al, Baggs 1, 35-13-92, resum at 1005 ft.

FREMONT—P. & R. Muskrat 1, 33-34-92, dr 50 ft. P. & R. Muskrat 1, 1-33-92, rigging. Kinney-Coastal, 22-3-1, dr 2580 ft. Texas Prod. Co., State 1, 36-34-95, rigging.

HOT SPRINGS—Texas Prod. Co., sw 23-45n-100w, dr 2792 ft. Midwest Refining Co., 8, 6-44-98, bldg rig. C. F. Robertson et al, se 17-43-92, spudded.

LINCOLN—Midwest Ref. Co., Waterfall 1, 35-22-115, dr 3445 ft. Midwest Refining Co., Grey's River 1, 25-37-117, dr 813 ft.

NATRONA—Prairie O. & G. Co., Baird 1, 22-31-81, strmmg 650 ft, td 730 ft.

PARK—P. & R. Pitchfork 1, 14-48-102, dr 650 ft. Midwest, Rosenburt 36, nw 25-58-98, dr 2765 ft. Rosenburg 1, 26-58-98, bldg rig. Resolute Oil Co., nw 17-57-101, resum 2155 ft. Henderson Prod. Co., 31-58-99, second sand dry, will deepen.

SWEETWATER — Mtn. Fuel Supply Co., Tucker 1, 18-13-99, cem 8¼-inch at 2480 ft. Mtn. Fuel Supply Co., Humphreys 1, 2-12-101, dr 3785 ft. Mtn. Fuel Supply Co., Otto Arnold 1, 24-19-104, dr 3130 ft. Mtn. Fuel Supply Co., Newberger 1, 13-12-101, cem 12½-inch cas at 1460 ft. P. & R. Corp., 26-20-104, sd 4100 ft, wait cem set at 3522 ft.

SUBLETTE—California Co., Wyss 1, 12-32n-115w, ur and co 2130 ft.

UINTA—California Co., U. P. 1, 7-17n-119w, fsh bit 3183 ft.

WESTON—Wyo. Drlg. Synd., 15-44-64, successfully sidetr 600 ft corkscrew casing, td 4350 ft, dr ahead.

MISSISSIPPI

ALCORN COUNTY — Alcorn Pet. Co.'s Matthews 1, 14-2-7, sd.

CHICKASAW COUNTY—Hightower & Golson's Flemming 1, 20-13-13, arr resume dr 1100 ft.

CLAIBORNE COUNTY—Ben White's Old Hen 1, 36-10-4, fsh cas, td 1970 ft.

HINDS COUNTY (Jackson Dist) — Mrs. Ella Rawls Reeder's State Land 1, 25-6-1, sd 2825 ft. Hennessey et al's Riverside 1, 23-16-5, arr resume dr 1050 ft.

HUMPHREYS COUNTY—Steel et al's Love 1, 30-14-3, sd 60 ft.

LAUDERDALE COUNTY—(Meridian Dist)—Meridian Nat. Gas Co.'s Mattie Houser 1, 33-8-18, sd in sand 1668 ft. Lauderdale O&G Co.'s Lackey 1, 2-7-16, rig up. J. R. Smith Oil Co.'s Craig 1, 2-6-14, dk.

LINCOLN COUNTY (Brookhaven Dist.)—Miss. Land & Oil Co.'s Pat Case 1, 21-8-6, sd 30 ft.

LEE COUNTY — Lee County Pet. Co.'s Hickman 1, 12-8-6, sd 920 ft.

MONROE COUNTY (Amory Dist.)—Amory Pet. Co.'s Hall 1, 8-13-17, arr resume dr 3045 ft. Amory Dev. Co.'s V. Bourland 1, 2-13-19, dr 2488 ft (correct). Amory Nat. Gas Co.'s Car-

ter 1, 17-13-17, dr slate 2450 ft. Ark. Nat. Gas Corp.'s Rye 1, 22-15-17, cas collapsed while bailing, show gas, td 3376 ft. Park Bowser et al's Cowart 1, 2-12-19, arr resume with drive pipe.

WARREN COUNTY (Vicksburg Dist.)—El Dorado Oil Co.'s Dornbusch 1, 8-18-5, cemtd 12½-inch cas 106 ft, (formerly carried as Henderson et al).

WEBSTER COUNTY—Cumberland Oil Co.'s Henley 1, 15-21-11, sd 1865 ft.

YALABOUSHA COUNTY—(Water Valley Dist.)—Philp Bros.' James 1, 20-11-5w, claim gas show 2630 ft, r to test 2655 ft.

ALABAMA

CHOCTAW COUNTY — Robinson-Greer's Long Bell Lbr. Co. 1, 28-10-4, arr to abn in sand and shale, td 4020 ft. Gulf Ref. Co.'s Thornton 1, lcn.

LAMAR COUNTY — Briggs & Knapp's Wefel 1, 25-12-14, hauling in 8-inch cas to set td 573 ft.

MARION COUNTY—P. J. McAlpine's Clark 1, 29-11-14, lcn.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, dr 610 ft. Hobson Bros. 1, 9-8-2, dr 550 ft. Oscar Brown's U. S. Land & Cotton Co. 1, 26-3-2, no report.

TENNESSEE

DECATUR COUNTY—Standard Oil Co. of La.'s Wyatt 1, dr 1260 ft. Chester County O. & G. Co.'s Montgomery 1, sr to reset cas 1040 ft.

SOUTH ARKANSAS

ASHLEY COUNTY—Atlantic O. P. Co.'s Bledsoe 1, 20-15-7, sd for water 3056 ft.

CALHOUN COUNTY—Ohio Oil Co.'s Stout Lbr. Co. 1, 31-14-12, dk. Phillips Pet. Co. et al's Eagle Mills Lbr. Co. 1, 11-16-12, rig up.

COLUMBIA COUNTY—G. W. Dawley et al's Fullenwider & Kitchen 1, 12-17-122, sd wo 2847 ft. Helena O&G Co.'s Pickler 1, 19-19-22, sd 2647 ft. Dr. Bush et al's Jones 1, 5-17-18, dr 2717 ft. T. R. Brown et al's Spencer 1, 18-18-22, rig up. Jacob Laskin et al's Dennis 1, 11-20-23, dr 2009 ft.

CRAWFORD COUNTY — Industrial O&G Co.'s Brownlee 2, 22-9-31, dr 2290 ft.

DREW COUNTY—McClintock & Goedke's Ogle 1, 35-13-5, trying to clean, td 2530 ft.

FAULKNER COUNTY—Gold Creek O&G Co.'s Stermer 1, 17-4-13, temp abn, td 3462 ft.

FRANKLIN COUNTY — Ozark Nat. Gas Co.'s McElroy 1, 15-8-27, lcn.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3-19w, arr cemt 5-3/16-inch cas 2996-3009 ft. Chaywood Oil Co.'s Malvern Lbr Co. 1, 17-2-17, sd wo 1668 ft.

GRANT COUNTY—Jones & Watlins' Meek 1, 5-4-11, sd 1400 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 21-12-13w, sd 2941 ft.

LOGAN COUNTY—Ark. La. Pipe Line Co.'s Hanna 1, 26-7-23, cleaning out, td 2285 ft.

OUACHITA COUNTY — Lohman & LeGrand's Fogle 1, 18-14-16, cemtd 15½-inch cas 42 ft, sd 1570 ft. Flaucher et al's Bucks 1, 7-15-17, sd wo 2476 ft. Timberlake et al's Wright 1, 25-14-18, sd 2907 ft. McDonald Bros.' Wilson A-2, tested 18 joints oil, 2 joints rotary drill mud in 8 minutes 2774-81 ft sand 2776-81 ft, arr set cas. Chas. McDonald's Wilson B-3, 25-15-18, dr 2350 ft Sundby et al's Farris 1, 27-15-15, dk pat. Copenhaver et al's Warnick 1, 2-15-17, dk.

ST. FRANCIS COUNTY — W. F. Harris' Halbert 1, 32-4-4, lcn.

UNION COUNTY — Johnson-Gummer Oil Co.'s Cargile 1, 4-18-13, dr 2215 ft. Wesson et al's Booth 1, 12-15-19, sd 2227 ft. Foster et al's Murphy Land Co. 1, 22-17-17, sd 1400 ft. J. P. Hawkins et al's Goodwin 1, 36-17-16, dk. W. M. Coates, Tr.'s, McDuffie 1, 32-19-16, sd for fuel in red beds 3563 ft. Gulf Ref. Co.'s Gaddy 2, 30-17-14, pulling dr pipe in grey sand 3691 ft. S. Arrendale's Gallagher & Nelson 1, 18-18-17, rig up. John Stark et al's Ainsworth 1, 8-19-16, dk. T. J. Woodley's First Natl. Bank 1, 34-19-18, lcn. O. W. Estes' Ramsey 1, 24-17-14, lcn. Johnson & Foster's Oliver 1, 18-17-13, lcn.

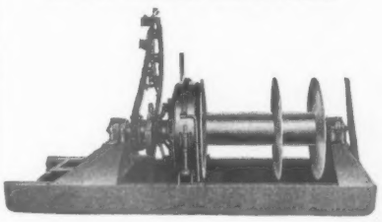
FOR SALE

20,000 Feet of 18" O.D., 3/8" Wall second hand pipe, random lengths, plain ends, in good condition.

THE SAWHILL MANUFACTURING COMPANY,
Oliver Building, Pittsburgh, Pa.

OCS For **10,000-Foot Wells**

CHAIN DRIVEN SAND REELS

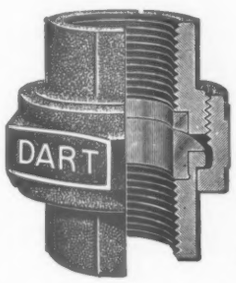


See our Ad of June 7th

THE OIL COUNTRY SPECIALTIES MFG. CO.

COFFEYVILLE, KANSAS

BRONZE TO BRONZE
Is the Reason



DART UNIONS
Give Service
Try them

E. M. Dart Mfg. Company
PROVIDENCE, R. I.

The Fairbanks Company
Distributors

CARBON (BLACK DIAMONDS) FOR DIAMOND CORE DRILLS

—IMPORTERS—
INDUSTRIAL DIAMONDS
—MANUFACTURERS—
DIAMOND POINTED TOOLS FOR ALL MECHANICAL PURPOSES

WRITE OR WIRE FOR CATALOGUE AND FULL PARTICULARS
THE DIAMOND DRILL CARBON CO.
PARK ROW, NEW YORK, N.Y. CABLE ADDRESS, CREDOTAN, N.Y.

Coastal Oil Finding Company

Contracts taken for Torsion Balance Work

Esperson Bldg., Houston, Texas
Phone Fairfax 4383

McCollum Exploration Company

Contracts taken for Seismograph Work

UNITED STATES
5522 Connecticut Ave.,
WASHINGTON, D. C..

FOREIGN COUNTRIES
1211 Esperson Bldg.,
HOUSTON, TEXAS

HEYDRICK'S NEW MAPS
WEST TEXAS
County Maps
Combination Maps
Descriptions and prices on application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

PATENTS
Patents Obtained and Trade Marks and Copyrights Registered
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

THE FT. WORTH LABORATORIES

Field Gas Testing. Analysis of oil field brines, gas minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware.
F. B. Porter, B. S., Ch. E., Pres.
R. H. Fash, B. S., Vice-President
828½ Monroe St. Ft. Worth, Tex.

HIRSCH, BROWN AND SUSMAN
Attorneys at Law
Bankers Mortgage Building,
Houston, Texas
Specializing in Oil Law and Land Law

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
BOSSIER PARISH—		
Triangle Drilling Co., J. H. Fullilove 1, 11-17-12	¶4	1717
CADDO PARISH—		
Standard Oil Co. of La., Hunter Est. 2, 8-19-14	70	2418
FRANKLIN PARISH—		
Ruston Drilling Co., West Va. Lbr. Co. 1, 23-16-7e	*	3500

BIENVILLE PARISH—W. G. Gray, Tr.'s, Snyder 1, 15-16-6w, coring lime 2400 ft.

BOSSIER PARISH—Nell & Lanier's Biedenharn 1, 23-21-14, sd 790 ft. Walker et al's Antrim 1, 28-22-13, sd wo 3017 ft, td 3048 ft. John F. Woodman's Bolinger 1, 9-22-11, sd 3532 ft. Triangle Drilling Co.'s J. H. Fullilove 1, 11-17-12, est 4 mil ft gas, td 1717 ft. Deleware Dev. Co.'s Bolinger 4, 38-23-11, tested 2 mil ft gas and show sw, ds test 6 ft sand 3914 ft, arr deepen. Palmer Corp.'s Schmidt 1, 14-17-12, rig up.

CADDO PARISH—D. C. R. Oil Co.'s Oden 1, 20-19-14, dk. Lide & Davidson's Oden 1, 21-19-14, dk. Walter Ray et al's Hunter Est. 1, 8-19-14, rig up. Hunter Est. 2, 8-19-14, lcn. Palmer Corp.'s Hunter Est. 1, 8-19-14, set 12¼-inch cas 120 ft. Hunter Est, 2, 8-19-14, lcn. Sam Gold et al's Henderson 1, 17-19-14, coring 2350 ft. Ohio Oil Co.'s Hunter Est. 1, 17-19-14, fsh swab, td 2414 ft. Hunter Est. 2, 17-19-14, sp. Hunter Est 3, 17-19-14, lcn. Hunter Est. 4, 17-19-14, lcn. Standard Oil Co. of La.'s Henderson 2, 7-19-14, dr sand rock 1943 ft; Hunter Est. 2, 8-19-14, pumping 70 bbls oil td 2418 ft; Hunter Est. 3, 17-19-14, lcn; Hunter Est. 5, 17-19-14, dr shale and boulders 2308 ft. Pope Oden 2, 18-19-14, dr chalk rock 1505 ft. S. T. Onyett, Tr.'s, Dixon 1, 10-18-14, lcn. Gulf Ref. Co.'s Pope Oden 3, 18-19-14, topped gas rock 850 ft, dr hard chalk rock 1595 ft. Oden 4, 18-19-14, dr blue gummy shale 778 ft.

CLAIBORNE PARISH—Smitherman & McDonald's Miller 1, 17-23-8, temp abn, td 4780 ft. El Dorado Chief Oil Co.'s Dance 1, 27-20-7, dk.

CATAHOULA PARISH—Lochnager O&G Co.'s Taliaferro 1, 26-9-6e, sd 900 ft.

DESOTO PARISH—L. M. Moffitt's Boatright 1, 3-10-13, tested 10,000 ft gas, sd 3078 ft. P. J. Becker's Tull 2, 23-12-15, dr chalk rock 1800 ft. Carlton Drilling Co.'s Stephens 2, 12-11-16, wosr, td 2046 ft. Longstreet Synd.'s Ramsey 1, 33-13-16, sdtr 2802 ft. Benedum & Trees' State 2, 22-14-12, tested show gas and sw 2600-2617 ft, sd wo.

FRANKLIN PARISH — Ruston Drilling Co.'s West Va. Lbr. Co. 1, 23-15-7e, dry abn, td 3500 ft. Davis et al's Moore 1, 12-11-6e, sd 1430 ft.

JACKSON PARISH—Geo. O. Baird's Tremont Lbr. Co. 1, 24-17-1w, dr crystallized lime 2752 ft.

LA SALLE PARISH—Tunica Pet. Co.'s L. & A. 47, 17-17-2e, bldg dk.

LINCOLN PARISH—V. E. Shaw's Voss 1, 1-20-3w, arr resume dr 2740 ft.

MOREHOUSE PARISH—Rainbow Oil Co.'s Louisville Cooperage 1, 33-22-8e, dk.

NATCHITOCHES PARISH — S. D. McDaniels' Clarke-Morse Lbr. Co. 2, 23-5-6w, sd 2536 ft. Robeline O. & G. Co.'s Cassady 1, 7-8-9w, show gas, ds stuck, td 3230 ft.

OUACHITA PARISH—Ouachita Nat. Gas Co.'s D'Arbonne B-2, 25-19-2e, sd 3349 ft. Phillips et al's School Fee 1, 16-16-4e, dr 3750 ft.

RAPIDES PARISH—G. E. Silbertson's Willemach 3, 13-5n-4w, sd 2250 ft. Glemora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RICHLAND PARISH—Austin & McDonald's Millsaps 1, 17-17-6e, cemtd 6-inch cas 2308 ft; Millsaps 2, 17-17-6e, tested sw, sd wo 2697 ft; Millsaps 3, 16-17-6e, lcn; Millsaps 4, 16-17-6e, lcn. S. R. Humble's Binion-Sartor 1, 22-17-6e, lcn; Etheridge 1, 28-17-16e, cemtd 6-inch cas 2291 ft. Hope Prod. Co.'s Standard of La. 1, 26-17-6e, dr 1190 ft; Eubanks 1, 26-17-6e, dr 1188 ft. North La. Gas Co.'s Humble 1, 20-17-6e, fsh ds 2210 ft. Palmer Corp.'s Eubanks 1, 26-17-6e, lcn; Hardwick 1, 16-17-6e, dr 800 ft; Jones 1, 22-17-6e, rig up; Miles 1, 11-17-6e, tested dry 2428-56 ft, testing 2476 ft; Rhymes 1, 21-17-6e, dr 1600 ft; Whitten 1, 21-17-6e, dr 2172 ft. North La. Gas Co.'s Baykin 1, 20-17-6e, blew out, cratered making est. 70 mil ft gas, td 2350 ft.

SABINE PARISH—R. L. Gay, Tr.'s, Bowman-Hicks 4, 14-7-14, dk; Sabine Lbr. Co. 2, 23-7-14, dr 1775 ft; Long-Bell Lbr. Co. 1, 26-8-14, setting 8¼-inch cas for test 1839 ft; A. H. Tarver's Long Bell Lbr. Co. 1, 29-8-13, tested 100,000 ft gas thru ds 3429 ft, dr hard lime 3480 ft.

UNION PARISH—Texas Co.'s Fuller 1, 9-21-2w, dr hard lime 2407 ft. Sundby et al's Security Trust 1, 6-23-1e, topped red shale, dr red shale 3311 ft. G. E. Carmatte's Tugwell 2, 21-22-1e, trying mud off sw 1845 ft. Carter & Wingfield's Clark A-3, 8-23-1e, dk. H. C. McDonald's Union Sawmill 2, 8-23-1e, sd 1500 ft.

WEBSTER PARISH—W. M. Kemp et al's Campbell 1, 11-22-10, lcn. P. Hudson's Slack 1, 1-22-11, sd 2592 ft. Nemours Corp.'s Munn 2, 1-22-10, tested 4 mil ft gas wo 2633 ft. Magnolia Pet. Co.'s Atkins 1, 4-22-9, 1000 ft oil in hole, std td 2665 ft. John F. Woodman's Boyd 1, 3-22-11, dk. Magnolia Pet. Co.'s Sallie Coyle 1, 2-22-11, dr 570 ft. McCook & Hibbler 1, 22-21-10, fsh ds in red shale 6091 ft; Roseberry 1, 19-23-9, lcn.

SOUTH LOUISIANA

ACADIA PARISH—Yount-Lee Oil Co.'s Crowley 4, Evangeline, dr 7325 ft.

ASCENSION PARISH—Gulf's United Lds. Co. 14, Sorrento, abn at 4075 ft. Triumph Oil Corp.'s Lacey 2, 3 mi se Sorrento twnste, dr 2700 ft sand. Big Dome Drlg. & Dev. Co. & J. S. Kimbrough's Rearwood 1, Darrow, dr 4590 ft shale.

CALCASIEU PARISH—J. O. Davis' Mimms 1, Lake Charles, dr 4920 ft gbo.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake B-5, E. Hackberry, lcn; Calcasieu Lake A-4, s pt Calcasieu Lake, lcn. Pure's

THIRTY DAYS TRIAL FREE
ONE TWO IN **E**
A Successful Balanced Throttle and Relief Valve
Made of best grade steel with bronze disc and seat
EXCLUSIVE FEATURES:
A balancing piston rigidly attached to valve stem causes equal steam pressure to be exerted in opposite directions. Operates easily and accurately under any amount of steam pressure.
Valve disc will not jamb or stick to valve seat.
No wear or strain on operating screw and screw bearing.
A RELIEF VALVE. Steam pressure in manifold and steam chest can be relieved at will of operator, allowing clutch to be released without reversing engine, saving jerking and breaking of chains, and excessive wear on engine bearings and draw-works. Enables driller to stop and start engine several times during one revolution of crank shaft.
Engine can be stopped and back pressure released **instantly**. Engine creeping absolutely prevented. Write us for further detailed information.
CRAUSBAY SUPPLY COMPANY
BEAUMONT, Incorporated TEXAS

JOHN F. WEINZIERL
CONSULTING GEOLOGIST
ADVISOR ON GEOPHYSICAL INSTRUMENTS
619 Petroleum Bldg., Houston, Texas

TEXAS SAND & GRAVEL CO., Inc.
Waco, Colorado and Amarillo, Texas
Washed and Screened Gravel and Sand, Pea Gravel, Dredged Pit run Gravel, Road Gravel, and railroad ballast.
Home Office: 1904 Amicable Bldg., Waco, Texas
Plants: Waco, Texland, Colorado, Tascosa, Ady, Saragosa
Phone 4467 and 4468
SERVING ALL THE TEXAS FIELDS

PATENTS
Patents Obtained, Trade Marks, Patent Causes
JESSE R. STONE
Formerly Assistant Examiner United States Patent Office
Andrews, Streetman, Logue & Mobley
12th Floor Union N. Bk., Houston, Texas

a BIG Mud Pump— FOR FAST DRILLING

The massive and rugged 14½x7¼x20-inch pump is proving eminently satisfactory for fast drilling on big, deep holes. Gives unequalled fluid volume at 1,500 pounds working pressure.

Bulletins will gladly be sent upon request.

GARDNER-DENVER COMPANY
QUINCY, ILL.

BRANCHES IN OIL FIELDS

Dallas Denver Houston Los Angeles San Francisco Tulsa New York
Chicago Philadelphia London, England

OIL COUNTRY DISTRIBUTORS

Atlas Supply Company.....Muskogee, Tulsa and Fort Worth
C. F. Camp Co.....Tulsa
Emsco Derrick & Equipment Co.....6811 So. Alameda St., Los Angeles
Haywood-Williamson.....Shreveport and El Dorado
International Supply Co.....Stores in all Principal Mid-Continent Fields
Norvell-Wilder Hdwe. Co.....Beaumont, Houston and Fort Worth
The Republic Supply Co. of Calif...Stores in all Principal California Oil Fields

GARDNER-DENVER

Yount-Lee 7, Sweet Lake, dr 5545 ft. Shell's Watkins 11, Black Bayou, plugged back from 1250 ft to 1000 ft.

IBERIA PARISH—The Texas Co.'s Vermilion Bay A-4, lcn. Gulf's State Z-9, Loreauville, abn at 900 ft.

IBERVILLE PARISH—Shell's Wilbert 3, White Castle, dr 5525 ft. Standard of La.'s Wilbert 2, Bayou Blue dome, abn 3620 ft; Wilbert 3, Bayou Blue, driving piling; Schwing 2, Bayou Blue, dk; Schwing 3, Bayou Blue, dredged canal.

LA FOURCHE PARISH—Gulf's Stark 14, Thibodaux, moving in; Stark 15, Thibodaux, dr 875 ft; Stark 17, Thibodaux, dr 1300 ft; Stark 12, Thibodaux, dr 1380 ft.

PLAQUEMINE PARISH—Gulf's Morris & Rose 1, Spanish Pass, dk. The Texas Co.'s Garden Island Bay 2, 15 mi se Venice, lcn. Humble's State Land 1, 2-20s-26e, lcn.

ST. BERNARD PARISH—Gulf Coast O. & G. Dev. Co.'s State Land 1, lcn.

ST. LANDRY PARISH—The Texas Co.'s Botney Bay Lbr. Co. Fee 2, Port Barre dome, running tubing 3620 ft. Gulf's Gaudet 1, Port Barre, sd 3825 ft.

ST. MARTIN PARISH—Ohio Oil Co.'s Martin et al 3, Hager dome, sd 4490 ft. The Texas Co.'s St. Martin Ld. Co. Fee 1, Hager dome, sd 1235 ft. The Texas Co.'s St. Martin Ld. Co. Fee 2, Hager dome, sd.

TANGIPAHOA PARISH—Joan Dev. Co.'s Lake Superior Piling Co. 1, dr 3650 ft sand.

TERREBONNE PARISH—The Texas Co.'s Taylor Bayou B-1, capping piling; Bay Coon Road B-2, lcn; Lake Barre A-2, capping piling; Lake Pelto B-1, setting cas at 1265 ft; Four Isle Bayou B-1, dr 475 ft; Timbalier Bay A-1, dr 2175 ft lime rock; Dog Lake Bayou A-1, lcn.

TEXAS

TEXAS GULF COAST

AUSTIN COUNTY—F. & M. Drlg. Co.'s Mewis 1, between Raccoon Bend and Bellville, sd 3775 ft. Whittington et al's Lass 1, 4 mi nw Bellville, ru.

BRAZORIA COUNTY—Humphreys Corp.'s Bryan 1, Bryan Heights, dr 3525 ft shale and gbo. Empire's Brock 3, Stratton Ridge, dr 4342 ft sand and lime. Thos. Faust et al's Fee 4, 2 mi s Nash Dome, dr 130 ft sand.

CALHOUN COUNTY—Baker & Thompson's Thomas 1, 9 mi w Pt. Lavaca, sd 2730 ft.

CHAMBERS COUNTY — Pure's Mayes 2, Lost Lake, sd 1990 ft; Mayes 3, Lost Lake, sd 1870 ft. Chicago Oil Corp.'s Lawrence 1, 10 mi s Barbers Hill, lcn. Layne et al's Fitzgerald 1, 1 mi s Barbers Hill, dr 1200 ft gbo.

COLORADO COUNTY — Merret et al's Zverck 1, 2 mi e Ellinger, sd 320 ft. Rich Oil Corp.'s Von Rosenberg 2, 3 mi w Alleyton, dr 2410 ft shale.

FAYETTE COUNTY—Moore et al's Kerr 1, Muldoon, dr 2417 ft rock. Kelley et al's Burke 1, 2 mi nw Flatonia, dr 510 ft shale. Magnolia's Culley 1, 4 mi n Fayetteville, lcn.

FORT BEND COUNTY—Humble's Miller 1, 3½ mi w Rosenberg, dr 3220 ft sticky shale. Gulf's Trone 12, Long Point, sp. Grayburg Oil Co.'s Ransom 1, s Richmond, dk.

GOLIAD COUNTY—Humble's Taylor 1, 5 mi n Goliad, dr 600 ft gbo.

HARDIN COUNTY—Gulf Coastal Oil Co.'s Nona Mills 1, 5 mi e Saratoga, sd 1725 ft. West Prod. Co.'s Baker 1, 5 mi e Saratoga, sd 4400 ft.

HARRIS COUNTY—Humble's Simms-Smith 75, Goose Creek, dr 4500 ft sand; Warren 5, 400 ft; Williams 1, Humble, pulling tubing; Hockley, dr 4810 ft sand; Irvin 1, Mykawa, dr Glass 1, lcn; Woodburn 1, 2 mi s Genoa, dr 3250 ft shale. Paxton et al's Brubacker 1, 1 mi ne Clodine, sd 1125 ft; Paxton & Pundt's Brown 1, sd 1900 ft. Little York Oil Co.'s Davis 1, Little York, sd 3830 ft. York & Robertson's Garrett 1, 5 mi se Fauna, ru.

JEFFERSON COUNTY — Deep Test Oil Corp.'s McFaddin 1, 1½ mi e Spindle Top, sd 3500 ft. J. W. Farhar et al's Rohwedder 1, 5 mi ne Beaumont, sd 2965 ft. River Oil Co.'s Ship Channel Land Co. 1, 2 mi se Beaumont, sd 1710 ft. Bleakie Oil Co.'s Tollivar 1, 2½ mi nw Voth, sd 2585 ft. The Texas Co.'s Pipkin 1, Bigg Hill, completed as gas well, 200 lbs pres at 5958 ft. Shell's Heisig 1, 2 mi n Hampshire, dr 5345 ft. Nederland O. & G. Co.'s Young 1, s Nederland, sd 2520 ft.

LIBERTY COUNTY—Humble's Sterling 5, Moss Bluff, dr 3611 ft shale. Pure's Liberty Investment Co. 1, Moss Bluff, ru. Republic Prod. Co.'s Mysilvec 1, 2 mi s Hardin, dr 4025 ft shale and lime. Gulf Prod. Co.'s Boyt 2, Hankamer, ru. Fort Bend Oil Co.'s Bladerack 1, N. Dayton, dr 4300 ft shale. Sun Oil Co.'s Kavaleik 2, N. Dayton, dr 4990 ft shale.

MATAGORDA COUNTY—Crossland et al's Hawkins 1, Shepherds Mott, sdtr 4200 ft. West Prod. Co.'s Meyers 1, 1½ mi n Gulf Hill, dr 4450 ft.

ORANGE COUNTY — Veteran Oil Co.'s Reed 1, 2 mi se Orange field, dr 4265 ft shale.

VICTORIA COUNTY—Humble's Welder 1, 3 mi se Nursery, dr 2365 ft gbo.

WASHINGTON COUNTY—Thomas et al's Giddings 1, 4 mi e Brenham, dr 1700 ft shale. Brains et al's L. S. Smith 1, 4½ mi ne Gay Hill, sp. Kellet et al's Carter 1, dr 1120 ft lime. Dekle et al's Calhoun 1, 4 mi e Quarry, sd 800 ft.

WHARTON COUNTY — Hearto Oil Co.'s Brown 1, 3 mi s El Campo, dr 2450 ft.

SOUTHWEST TEXAS

Completion

Company, Well and Location	Initial Production Bbls.	Depth
GUADALUPE COUNTY—		
Magnolia, Adams 1, Kingsbury.....	*	3160

BASTROP COUNTY — Gypsy Prod. Co.'s Lottman 1, e Bastrop, sd 2565 ft. Livingston et al's McCall 1, 1 mi s Bastrop, sd 2910 ft. Owens et al's Goodman 1, 1½ mi Cedar Creek, sd 2330 ft. Howell et al's Weckham 1, 2 mi s Paige, dr 1320 ft gbo.

CALDWELL COUNTY—Anderson et al's Horner 1, 1 mi s Lockhart, sd 1400 ft. Forest Oil Co.'s Moore 1, ½ mi s Luling, fsh. Harper et al's Miller 2, 1 mi w Lytton Springs, dr 1640 ft chalk. Detex Oil Co.'s Keefer 1, 3½ mi w Luling, sp.

GONZALES COUNTY—Greene et al's Dix 1, sw part of county, sd 1233 ft. Linderman Bros.' Frampton 1, 1 mi n Waelder, sd 610 ft. Joe Bruner's Miller 1, 1 mi n Gonzales, 2710 ft. Finnell & Elam's J. F. Robinson 1, J. Livergood sur, sd 1250 ft. Crown Pet. Co.'s Hattenbach 1, 8 mi sw Sample, dr 2325 ft sand. Fort Bend Oil Co.'s Hamm 1, 2½ mi e Harwood, dr 1950 ft rock.

GUADALUPE COUNTY — Sights et al's Woehler 1, 4 mi e Seguin, sd 2405 ft. Miller Bros.' T. A. Springs 1, 5 mi s Seguin, sd 2625 ft. Magnolia's Adams 1, Kingsbury, abn at 3160 ft. Trinity Drillers' Weinang 1, 4 mi s Kingsbury, dr 1935 ft shale. The Texas Co.'s Dallas Wilson 1, 12 mi e Seguin, dr 200 ft shale.

MAVERICK COUNTY—Rycade's Chittim 3, 20 mi e Eagle Pass, dr 4020 ft lime; Chittim 4, dr 3305 ft; Sullivan 4, 20 mi e Eagle Pass, dr 3330 ft lime.

STARR COUNTY—The Texas Co.'s Virginia Guerra 1, dr 3791 ft.

EAST TEXAS

BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, temp abn, td 3086 ft.

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, sd 1920 ft.

HARRISON COUNTY — McRitchie et al's Dean 1, Craft sur, sd 2165 ft.

RED RIVER COUNTY—D. M. Buffington's Hoosier 1, Hughart sur, sd wo 1863 ft. Shad Harper's Garland 1, Jos. Wagley sur, arr resume dr 1862 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd wo 1440 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd 3004 ft. Gulf Ref. Co.'s Caraway 1, Patterson sur, coring grey sandy lime 5073 ft.

WEST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
FISHER COUNTY—		
Mid-Kansas & Phillips Pet. Co., Stephenson 1	†	667
The Texas Co. & Phillips Pet. Co., Hall 1	*	3600
White Eagle O&R Co., Hughes 1....	*	2566
HOWARD COUNTY—		
Magnolia Pet. Co., H. Hyman 1....	15	1317
MITCHELL COUNTY—		
McGinley-Sigler Co., H. Hyman 1..	*	2006

ANDREWS COUNTY — Mid-Continent Pet. Corp.'s Fisher 1, elev 3192 ft, top salt 1720 ft, top lime 4275 ft, dr 4335 ft.

BORDEN COUNTY—W. A. Moncrief et al's Munger 1, lcn.

BREWSTER COUNTY—Ed. W. Bateman & Co.'s Neville 1-A, machine. Brewster Oil Co.'s Fee 1, fsh 1930 ft. E. L. Chapman et al's Skinner 2, dr 150 ft. J. P. Johnson & Bert Weekly's Jackson-Harmon 1, elev 3972 ft, dr lime 1492 ft.

COKE COUNTY—Ray McCamey et al's McCutchen 1, dr shale-anhydrite 2750 ft. Mid-Kansas O&G Co.'s Lackey 1, elev 2152 ft, ur cas 3785 ft.

CONCHO COUNTY—J. L. Duffy et al's Gilliam 1, spudded and sd. Lloyd Jones & Joe Liner's Jones 1, top lime 1770 ft, sd with show oil 1936-75 ft. A. W. Turner & Guardian Oil Co.'s Brosig 1, spudded and sd.

CRANE COUNTY—Gulf Prod. Co.'s Waddell 7, elev 2763 ft, top salt 1108 ft, top brown lime 2972 ft, co making 3 million ft gas with 200 ft oil in hole at 3428-34 ft.

CROCKETT COUNTY—W. A. Moncrief et al's R. Massie 1, (Sec. 47), elev 2520 ft, water trouble 1336 ft. Eppenauer Drlg. Co. & West Texas Pet. Corp.'s Noelke 1, cavey hole 665 ft. Lewis & Daniels' Pecos River Bed 1, elev 1967 ft, top lime 1002 ft, sd 1008 ft. Taylor-Link Oil Co.'s Powell 3, rig.

CULBERSON COUNTY — Deep Rock Oil Co. & Grisham-Hunter's Kloh 3, machine. Hickey et al's Finley 1, elev 3916 ft, sd 2275 ft. Scott & Dittman Drlg. Co.'s Miller 1, elev 4059 ft, sd in water 2530 ft. West Texas Oil & Explo. Co.'s McGeorge 1, sd 620 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, sd 4005 ft.

FISHER COUNTY — Cranfill-Reynolds & Sun Oil Co.'s Flannigan 1, elev 1798 ft, rig. Culbertson Bros. Co. & Mesa Oil Co.'s Griffin 1, elev 1842 ft, sd 2970 ft. Gilman & McMurray & French's Cleveland 1, elev 1973 ft, fsh 3565 ft. Magnolia Pet. Co.'s Alice Lee 1, dr 995 ft. Mid-Kansas & Phillips Pet. Co.'s Stephenson 1-A, skid rig, td 667 ft. Roeser-Pendleton & Amerada's Haught 1-A, set cas 880 ft. The Texas Co.'s D. W. Stephens 2, rig.

GARZA COUNTY—Emerald Oil Co.'s Bargsley 1, top lime 1625 ft, swabbed 35 bbls oil after shot, td 2543 ft. Gulf Prod. Co.'s Street 1-D, top salt 770 ft, dr 1355 ft.

GLASSCOCK COUNTY—A. & F. Oil Co.'s Turner 1, dr 1210 ft. The California Co.'s E. F. Turner 1, rig. Gibson-Johnson et al's Dean 1, elev 2718 ft, top salt 1075 ft, set cas 2572 ft. Houston Oil Co. et al's McDowell 1, dr 465 ft. Kirby Pet. Co. et al's Phillips 1, rig. Lion O. & R. Co.'s Coffee 1, lcn. Penn Oil Co. et al's Shaffer 1, rig. Texas-State Oil Co.'s Edwards 1, dr 915 ft.

TOM GREEN COUNTY — Cannon et al's Rust 1, lcn. Williams et al's Wilkey 1, sd hfw 750 ft.

HOCKLEY COUNTY — World Oil Co.'s Ellwood 1, elev 3363 ft, dr 1530 ft.

HOWARD COUNTY—Fuhrman Pet. Corp.'s Reed 1, dk. Gibson-Johnson et al's Reed 1, elev 2323 ft, top lime 1910 ft, sd with 1500 ft oih at 2703-08 ft, td 2949 ft. McGinley-Sigler Co.'s B. Hyman 1, (Sec. 92), co 725 ft. Meriwether Oil Co.'s Eva Smith 1, spudded and sd.

HUDSPETH COUNTY — The California Co.'s University 1, elev 5833 ft, sr cas 1640 ft. L. E. Lockhart et al's Fee 1, elev 4799 ft, dr 1210 ft. Western States Oil Co.'s Gardner-Mosely 1, elev 5086 ft, sd 3155 ft; Moore 1, elev 5050 ft, sd 2760 ft.

IRION COUNTY—J. B. Crawford et al's Williams 1, spudded and sd. Kimbrough et al's Nutt 1, elev 2299 ft, sd 1420 ft. W. W. Brown & Perry Fox et al's Tankersley 1, elev 2241 ft, bailing 10 bbls oil daily 1318-29 ft. Kingwood Oil Co. et al's Sugg 1, elev 2334 ft, dr soft shale 7025 ft. Pecos Valley Oil Co.'s Stocks 2, fsh 1200 ft. Webb et al's Nutt 2, lcn. Wittmer Oil & Gas Properties' Abe Mayer 2, dr 1110 ft.

JONES COUNTY—J. H. Adsit et al's Swenson 1, dr 605 ft. J. E. Brewer et al's Goodman 1, lcn. Geo. Callahan & Worth Oil Co.'s Britton 1, ur cas 3000 ft. Campbell et al's Miller 1, lcn; Newman 1, rig. Gilman-McMur-

ray & Humble's J. F. Willis 1, show oil 2047-56 ft, dr 2065 ft. Sam Knepley et al's Horn 1, dd, elev 1759 ft, top lime 2410 ft, co 2507 ft. McGinley-Sigler Co.'s Whittemore 1, dr 2600 ft. W. M. Treat O&G Co.'s Hodges 1, ur 1760 ft. White Eagle O&R Co.'s Teague 1, dr 2115 ft.

LOVING COUNTY — Lockhart & Co.'s Bower-Wells 2, dr 640 ft; Hazell 1, elev 2705 ft, dr 2310 ft; Hazell 2, top salt 700 ft, dr 3315 King 1, spudded and sd. W. G. Clark et al's ft; Johnson 2, dr 3310 ft; Wheat 1-H, co and swab 10 bbls oil daily after shot, td 4197 ft.

LYNN COUNTY—Hart Oil Corp. & Geo. McCamey's Edwards 1, elev 3128 ft, top salt 2140 ft, dr 2510 ft.

MENARD COUNTY—J. L. Duffy & Loofburrow's Winslow 1, sd 1010 ft.

MIDLAND COUNTY — Phillips Pet. Co.'s Stokes 1, elev 2666 ft, top salt 1610 ft, top lime 3720 ft, sulphur water 4055-75 ft, dr 4115 ft.

MITCHELL COUNTY—The California Co.'s Clark 2, top lime 1540 ft, co after shot 2962-3115 ft; Handley 1, dr 1125 ft. Clopton & Hammon's McKenzie 1, lcn. Simms Oil Co.'s Ellwood 1, elev 2237 ft, top lime 1215 ft, dr 4385 ft. Republic Prod. Co.'s Scott 1, dr 1475 ft. Spence et al's Brown 1, elev 2328 ft, top salt 730 ft, bad hole 1910 ft. Teas & Wheeler's Radford 1, dr 4085 ft. Westyde Inv. Co.'s Ellwood 1, elev 2185 ft, ur 1050 ft.

NOLAN COUNTY — L. G. Bradstreet & Co.'s Kuteman 1, dr gray lime 2475 ft. Gibson-Johnson et al's S. P. Boyd 1, lcn. Phillips Pet. Co.'s Plunkett 1, cem cas 2435 ft.

PECOS COUNTY — Harry Adams Drlg. Co.'s University 1, top salt 910 ft, dr 1440 ft. Atlantic Oil Prod. Co.'s J. C. Trees 1, elev 2489 ft, show oil and water, sd 1870 ft. Buell-Hagan et al's University 1-B, elev 2760 ft, top salt 945 ft, flowing oil by heads via tubing at 1320-32 ft. Karl Crowley et al's Heiner 1, elev 2548 ft, sd 1302 ft. Ditto Oil Interests' Montgomery 1, elev 4434 ft, sd 1505 ft. Doran & John McGee's Pecos Valley Fee 1, elev 2437 ft, top salt 1080 ft, sd making 3 million ft gas and spray oil 1540-41 ft. Cowboy Evans et al's Pecos 1, dr 365 ft. Gibson-Johnson et al's Grace 1, set cas 575 ft. Independent O&G Co.'s H. Rayburn-Iowa Realty Co. 1, dr 735 ft. Jay Hawk Oil Co.'s C. J. Price 1, lcn. Sam Kitts et al's Sherbino 1, fsh 250 ft. Marland Prod. Co.'s University 1, dr 250 ft. Mauch & Krogen's Holmes 1, elev 2325 ft, top salt 535 ft, sd 1442 ft. W. A. Moncrief et al's Torberg 1, dk. R. E. Moore et al's Arnold 1, dr 680 ft. J. D. O'Mara et al's Byrne 1, dr 895 ft. Phillips Pet. Co.'s Bowser 1, fsh 365 ft; Courtney-Pryor 1, elev 2951 ft, cased off oil prod. 1345-75 ft, sd 1648 ft. Plymouth Oil Co.'s Perry 2, elev 2899 ft, co with 1250 ft oil in hole, no water, 1792-96 ft, td 1817 ft. Rio Pecos Oil Co.'s Yates 2, top salt 475 ft, dr 845 ft. Rowan & Ting's J. A. McDonald 1, lcn. Schumaker et al's Williams 1, elev 2388 ft, sd 1200 ft. Seminole Oil Co.'s Cordova Union Fee 1, lcn. Shell Pet. Corp.'s University-Bower 1, elev 2486 ft, top salt 765 ft, top lime 1480 ft, flowing sulphur water 1735-1770 ft. Shell & Kirby Pet. Co.'s University 1, elev 2628 ft, dr 4985 ft. Ervin Drlg. Co. & B. J. Spikes' Brown 1, elev 2387 ft, top salt 740 ft, dr gray lime 2010 ft. Talbot et al's Unsicker 1, machine. Taylor-Link Oil Co.'s University 1, elev 2500 ft, top salt 835 ft, top lime 1375 ft, flowing 120 bbls 27.6 deg. gravity oil daily 1613-28 ft. Tidal Oil Co.'s University 1, elev 2482 ft, top salt 784 ft, top sulphur water 1315 ft, lowering cas 1403 ft. Transcontinental's University 1, elev 2552 ft, top lime 1035 and 3315 ft, dr 6½ ft by tools at 4312 ft. R. D. Webb et al's Fee 1, lcn. Clayton W. Williams' Sanford 1, dr 635 ft. World Oil Co.'s Kloh 1, elev 2810 ft, co 3105 ft.

PRESIDIO COUNTY — Brite Prod. Co.'s Fee 4, dr 525 ft. C. E. Miller-Delmar & Phillips Pet. Co.'s Tootle 1, ur cas 3128 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 1-C, elev 2731 ft, top salt 1100 ft, sd for 16-inch cas 2636 ft; University 2-C, elev 2703 ft, top salt 1071 ft, dr 2896 ft; University 131, showing oil 6830-6950 ft, dr soft lime 7631 ft; University 151, sd 3035 ft.

REEVES COUNTY — Earl Hemby et al's Brooks-Huling 1, spudded and sd. Penn Oil Co. et al's Bowles 1, elev 2783 ft, top salt 1725 ft, traces oil and gas, dr 5530 ft. Southern Crude Oil & Dixie Oil Co.'s Kloh 1, elev 2784 ft, dr 1505 ft. D. R. Thompson et al's Eddins 1, elev 2719 ft, top salt 1622 ft, top gray lime 3216 ft, sr 5658 ft. Lee O. White et al's Mrs. Lizzie Hershenson 1, elev 3244 ft, sd 1530 ft.

RUNNELS COUNTY—Herbert Oil Co. et al's Currie 1, dr 1935 ft. Independent O&G Co.'s Rollwitz 1, show oil 3905-28 ft, casing trouble. Ira Nourse & E. Tilton's Cramer 1, elev 1775 ft, showing oil, fsh 3850 ft.

SCHLEICHER COUNTY—Ft. McKavitt Oil Co.'s Tisdale 1, elev 2155 ft, sd 3023 ft. Interstate Explo. Co.'s Whitten 1, sd 3545 ft. Underwood Oil Co.'s Tisdale 1, spudded and sd.

SCURRY COUNTY—R. B. Pender et al's Davis 1, elev 2208 ft, top salt 445 ft, dr 3105 ft. Texas-Canadian Oil Co.'s S. W. Mooar 1, lcn.

SUTTON COUNTY—Phillips Pet. Co.'s Holman 1, elev 2247 ft, top lime 2315 ft, fsh 6633 ft. L. G. Priest et al's Allison 1, dr 2600 ft.

TAYLOR COUNTY—B. L. Carpenter et al's Harrison 1, lcn. J. B. Jameson et al's Webb 1, elev 1905 ft, set 5-inch cas with hfw 4110-20 ft. C. M. Root Drlg. Co.'s Martin 1, dr hfw 2475 ft. Magnolia Pet. Co.'s W. E. Hamner 1, show oil 2740-42 ft, dr 2810 ft.

TERRELL COUNTY — Keck-Pecos Oil Trust's Hamilton 1, elev 1733 ft, dr 2510 ft. Mrs. J. B. McPhee et al's Sam Belt 1, sd 520 ft. Milham Corp.'s Bassett 1, elev 2270 ft, fsh tools 5076 ft. Wooley-Jones et al's Pankenham 1, elev 2607 ft, sd 640 ft.

VAL VERDE COUNTY—Dyer Bros. et al's Wilson 1, elev 2115 ft, sd 2920 ft. Producers Oil Co. et al's Everett 1, sd 2450 ft. Valvert Oil Corp.'s Bassett 1-A, elev 2069 ft, sd 3760 ft.

WARD COUNTY — Atlantic & Delmar's Hayzlett 3, machine. Gulf Prod. Co.'s Hutchings 2, elev 2655 ft, top salt 1240 ft, top brown lime 2250 ft, dr gray sand with 500 ft oil in hole 2524 ft; O'Brien 5, elev 2681 ft, top salt 1273 ft, top brown lime 2460 ft, flowing 120 bbls oil daily, dr broken pay 2610-2740 ft; Wristen Bros. 1, cem cas 770 ft. Penn Oil Co. & Atlantic's Bennett 1, cavey hole 300 ft. Shipley Oil Corp.'s Hayzlett 2, machine. Tex-Oil Prod. Co.'s Redman 1-A, set cas 231 ft.

WINKLER COUNTY—V. T. Bolin & Co.'s Brown 2, top salt 1300 ft, sd for water 1800 ft. Liner Drlg. Co. et al's Campbell 1, sd 400 ft. Magnolia Pet.'s Scarborough 2, top salt 1125 ft, top lime 2510 ft, cem cas 2805 ft. Shell & Llano Oil Co.'s Scarborough 6, top salt 1500 ft, flowing 110 bbls oil daily 2891-3075 ft. Texas-Canadian Oil Co. et al's Kloh 1, elev 3243 ft, top salt 1490 ft, sd 4008 ft. Tidal Oil Co.'s Scarborough 1, elev 2911 ft, top salt 1190 ft, top lime 2690 ft, swab 25 bbls oil 2945-50 ft.

YOAKUM COUNTY — Bert Weekly Oil Corp.'s Knight 1, elev 3693 ft, dr salt 3000 ft.

$40,000 Saved By Using Airplanes In One Day

Los Angeles.—The value of company-owned airplanes was recently demonstrated in California by the Richfield Oil Company when for the first time in the United States a large recording of counterparts of a bond indenture was completed in an entire State in one day.

At four a. m., June 19, counterparts of this indenture which covered a $25,000,000 convertible 6 per cent. bond issue of the Richfield Oil Company of California were received from the printers. To meet legal requirements it was necessary that these counterparts be filed in the 44 counties of California in which Richfield owns property.

Using ordinary mail transportation to various county seats it would have taken six days before these recordings could have been completed. This would have represented a loss of approximately $40,000 in interest charges. At 5:30 o'clock three Richfield owned planes left Vail field, Los Angeles, carrying company officials with the hope of having all recordings completed by night. Arrangements had been made for branch managers or others in the company employ to meet the planes at designated airports and make the contact with the respective county recorders.

I. N. Randall, assistant to C. M. Fuller, president, in a tri-motored Fokker plane, piloted by Lieutenant Tommy Fowler, landed at the Oakland airport, his first stop, three hours later and proceeded northward. J. T. French, also assistant to Fuller, in a Stermann, piloted by Dudley Steele, head of Richfield's Oil Company's aviation department, landed at Sacramento at 9:22 and Red Bluff at 11:14 as the first steps in the work it was to accomplish; while a Waco carrying W. H. Cotrel, assistant to Charles Garretson, and piloted by Ralph Hall, covered Southern California with the first stop at San Diego.

Airports were not available at all county seats, and the papers sealed in aluminum tubes, were dropped by parachutes at designated points so as to save time.

By 8:15 Wednesday evening, telegraphic advice from the last of 44 counties was in the hands of President C. M. Fuller of the Richfield Oil Company at Los Angeles, signaling the successful completion of this endeavor in one day.

Central Texas Refining Company Buys Oil

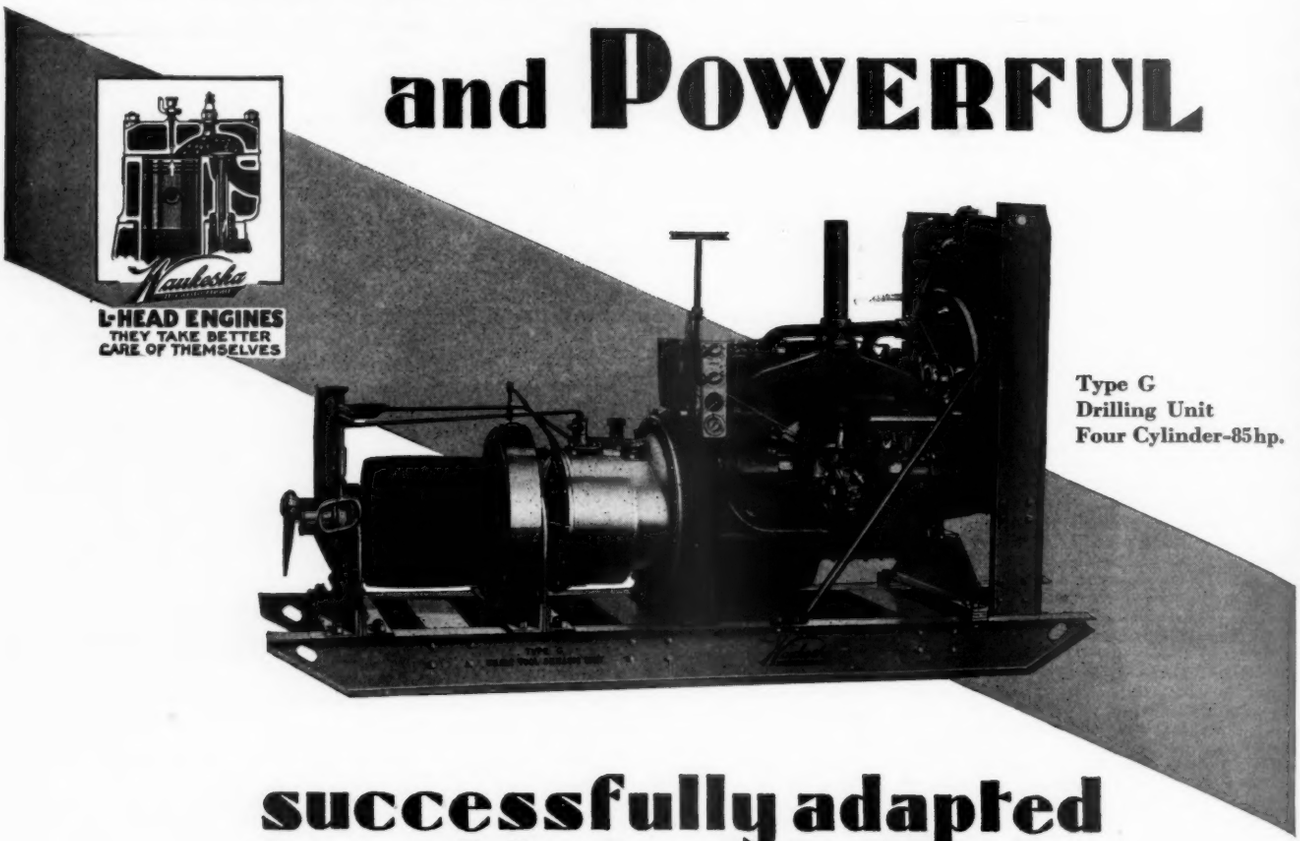
Corsicana, Texas. — Approximately 75,000 barrels of 35-36 degree gravity storage oil in Corsicana-Powell field has been sold by Simms Oil Company to the Central Texas Refining Company along with two 55,000 barrel steel tanks, four miles of gathering lines and a tank car rack. A substantial premium above current posted prices was paid for this crude to offset the expense of gathering same, while the physical properties involved in the deal netted Simms Oil Company $60,000. The lines terminate at the Angus refinery of the Central Texas Refining Company, and have been used heretofore in delivering production to the plant. Arrangements have been made for the current production of the Simms Oil Company in the Corsicana-Powell field, amounting to about 400 barrels daily, to be purchased by the above refining concern.

Maricopa Flats

Taft, Calif. — The blowing out of North America Consolidated's No. 1, Section 8-11-23, a test of the extension recently discovered in the Maricopa Flats district, has attracted fresh interest in an area which has been active for several months. The blowout occurred while drilling was in progress at 3035 feet and was apparently caused by a gas pocket. It is possible, however, that the oil sand has been found shallower than expected. A string of casing will be cemented to test the present formation. The well flowed oil, mud and water at a high rate for several hours but was killed with heavy mud.

XUM

PORTABLE and POWERFUL



Type G
Drilling Unit
Four Cylinder-85hp.

successfully adapted to cable tool drilling.

COMPLETELY self-contained and adapted for quick and easy installation--Waukesha Drilling Units not only cost less to begin with but are much cheaper to run. Either the four or six cylinder type is thoroughly suited to handle cable tools within their capacity range of 70 hp. to 120 hp.

In the field these units show all the flexibility of steam and have repeatedly proven their reliability. They run on "natural gas" or gasoline, and are particularly convenient where water is scarce. You'll want all the details, of course. Write *Oil Industry Division for Bulletin No. 721. Waukesha Motor Company, Waukesha, Wisconsin. Offices: New York—Tulsa—Houston—San Francisco.*

948

WAUKESHA ENGINES

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Heavy Portable Rotary

PORTABLE ROTARY RIG COMPANY

Portable Rotary Rig Company's new extra heavy type portable rotary rig, equipped with a two-speed Herringbone double reduction gear and a new style extra heavy portable reversible clutch unit was designed for use in connection with extra heavy equipment. It is equipped with the latest Waukesha engine, which is a six cylinder, 300 horsepower, to be fueled by either natural gas or gasoline.

Mead Brothers, drilling contractors, recently drilled a well at Cushing, Oklahoma, to 4200 feet in 19 days with this outfit, using natural gas at a rate varying from 47,000 to 54,000 cubic feet per 24 hours in two 200-horsepower engines. An average consumption of lubricating oil on this job ran four quarts daily, making the total fuel cost a minimum of $15.00 per day.

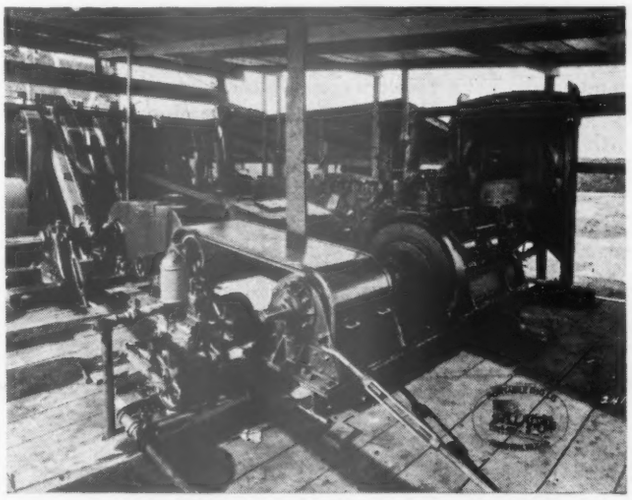
The new rotary rig is designed for both cable tool or rotary drilling, the only changes necessary to change from one to the other type of drilling is to change the sprocket in the clutch which ordinarily operates the driving chain to the draw works, changing the split pulley, as both driving sprocket and pulley are split and can be changed in a few minutes.

A two-speed gear box used in this unit employs a two-speed reduction 3½-to-one for low speed in drilling, and a high speed used for lifting the traveling block while going back in the hole with the drill pipe. The method of changing from high to low speed in the box is by jaw clutches the same as is used on the present day draw works of standard construction. All bearings are anti-friction type with the exception of the low speed shaft, and all bearings and gears are flood lubricated, running in a bath of oil at all times.

The reverse used in this assembly is of heavy construction and is mounted entirely on Timken anti-friction bearings, two to each pedestal, which offers more safety in operation. The housing and split type sprocket employed in this unit to connect to sprocket on any standard draw works is carried between two extra heavy anti-friction bearings, allowing free idling motion at all times. The forward clutch is of the single dry disc type and has a safety factor of three.

More information may be had by addresing the company.

Portable rotary rig hook-up showing 300-horsepower, six cylinder Waukesha motor and Oil Well Supply duplex pump



Complete assembly of portable rig for operating draw works

GENERAL ELECTRIC BULLETINS

General Electric Company has off the press a number of loose-leaf bulletins for filing in hand-book form with previous bulletins covering new or improved products of the company. Any of this list may be obtained by writing the company headquarters at Schenectady, New York.

GEA-1114 is a two-page bulletin on Solenoid-operated valves for the remote control of liquids and gases under pressure. GEA-801A is a four-page folder describing General Electric baths electrically heated. GEA 181A in two pages takes up the enclosed magnetic switches for alternating-current motors, and GEA-37D describes in four pages the direct-heat electric furnaces, types RRB and RRC. GEA-594A covers the General Electric automatic-control panels for industrial electric heating. GEA-67A describes the CR2931 float switches for use with automatic pumping equipments for water-level control, suitable for either tank or sump operation. The atomic-hydrogen arc-welding equipment for hand welding on 50 and 60-cycle circuits only is described in GEA-823B, a four-page folder bulletin. GEA-788A is a four-page bulletin devoted to outlining the construction and operation of Type FT, normal starting torque; for full-voltage starting general purpose squirrel cage motors.

All of these bulletins are fully illustrated with photographs of the various lines of equipment and also with charts, where necessary, to illustrate operation, performance and other interesting factors.

NAYLOR PIPE IN GAS LINES

The Naylor Pipe Company has recently supplied several miles of 12- and 14-inch Naylor Toncan iron pipe for a gas line to be used by the Cabot Company of Pampa, Texas, on moving gas from the casing head plant to its carbon plant in the Pampa district. Skelly Oil Company has recently completed a natural gas line of six-, eight- and 12-inch Naylor Toncan iron pipe for gathering lines to convey casing head gas to its Plant No. 8 in Borger field. The Shaffer Oil & Refining Company, the Naylor Pipe Company announces, has also recently installed a vacuum gas line of Naylor Toncan iron pipe of 10-inch diameter, which will be used in conveying natural gas from wells to the refinery near Mehan, Payne County, Oklahoma.

Deep Well Turbine

AMERICAN WELL WORKS

American Well Works, Aurora, Illinois, has recently announced its new six- and eight-inch deep well turbines to fit small drilled wells.

In using this equipment provision has been made for complete drainage of all waste oil and water leakage, and the discharge pipe is located above the floor level, permitting easy access.

The deep well turbine consists of the turbine head proper, which is the driving unit, the supporting pipe, which closes the driving shaft, and the turbine itself, which consists of the number of stages necessary for the specific requirements.

Deep Well Turbine

The supporting pipe is attached to the turbine head and the turbine proper is attached to the lower end of the supporting pipe. The turbine proper is a special style of the turbine type of centrifugal and is designed with former American Well Works deep well turbines.

All bearings are oil lubricated by gravity feed from the surface and the gravity feed is electrically controlled.

Engineering data and construction details of these turbines may be had by writing the engineering department of the company at the above address.

ENDURO STEEL CATALOG

Enduro Nirosta Steel products, produced under Krupp-Nirosta patents and under the supervisory direction of Professor Doctor Benno Strauss, director of research, Fred Krupp A. G. Germany, by the Central Alloy Steel Corporation, Massillon, Ohio; Ludlum Steel Company, Watervliet, New York; and The Babcock & Wilcox Tube Company of New York City, are given a neat display through a catalog just off the press. Announcement is made in this catalog of Enduro K-A-2 steel being made available to American industry through American enterprise.

For the purpose of illustrating this new product the catalog pages are faced with Enduro K-A-2. The various uses of the product are briefly told throughout the catalog and illustrated on the opposite page, giving the reader a complete outline of each industrial use at a single glance.

Tables showing corrosion resistance and the chemical and physical properties of the product are given in a simply instructive manner. The fabrication of Enduro K-A-2 is outlined under separate headings of forging, annealing, removal of scale, riveting, welding, and soldering and brazing.

A copy of this catalog may be had upon request to any of the three companies listed above.

CORRECTION

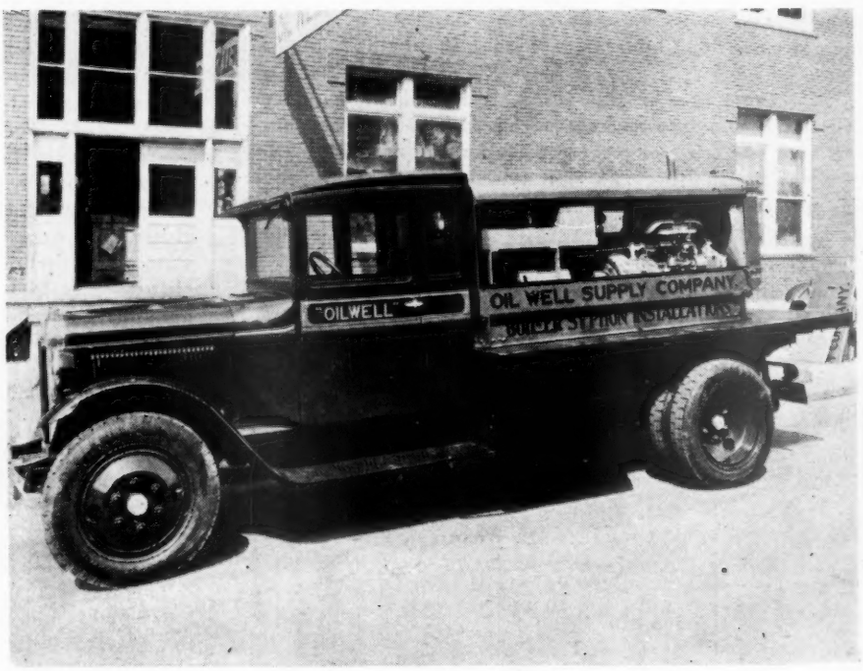
Last week's issue of The Oil Weekly carried a new equipment story on the Gray Specialty Company's new releasing spear. This story carried mention of Gray Tool Company in the heading and in so doing created a wrong impression, as the latter concern is not interested in the spear. Elsworth Gray is the organizer of the Gray Specialty Company, which makes headquarters at Houston, Texas.

LUDLUM STEEL COMPANY

Ludlum Steel Company of Watervliet, New York, has published a 32-page catalog covering Nitralloy and the Nitriding process. Nitriding, the process by which special steels can be surface-hardened at a low temperature by the action of ammonia, and nitralloy, steels of special analyses for use in the nitriding process are fully taken up in the following table of contents making up this catalog:

Nitralloy and the Nitriding Process, The Analyses of Nitralloy, The Physical Properties of Nitralloy, The Operations Prior to Nitriding, The Equipment for Nitriding, The Nitriding Process, The Operations after Nitriding, and The Properties of the Nitrided Case. Diagrams and charts illustrate the above articles for completeness, and photographs of equipment resulting from the processing are used for examples of the operations.

Copy of the catalog will be mailed upon request to the company.



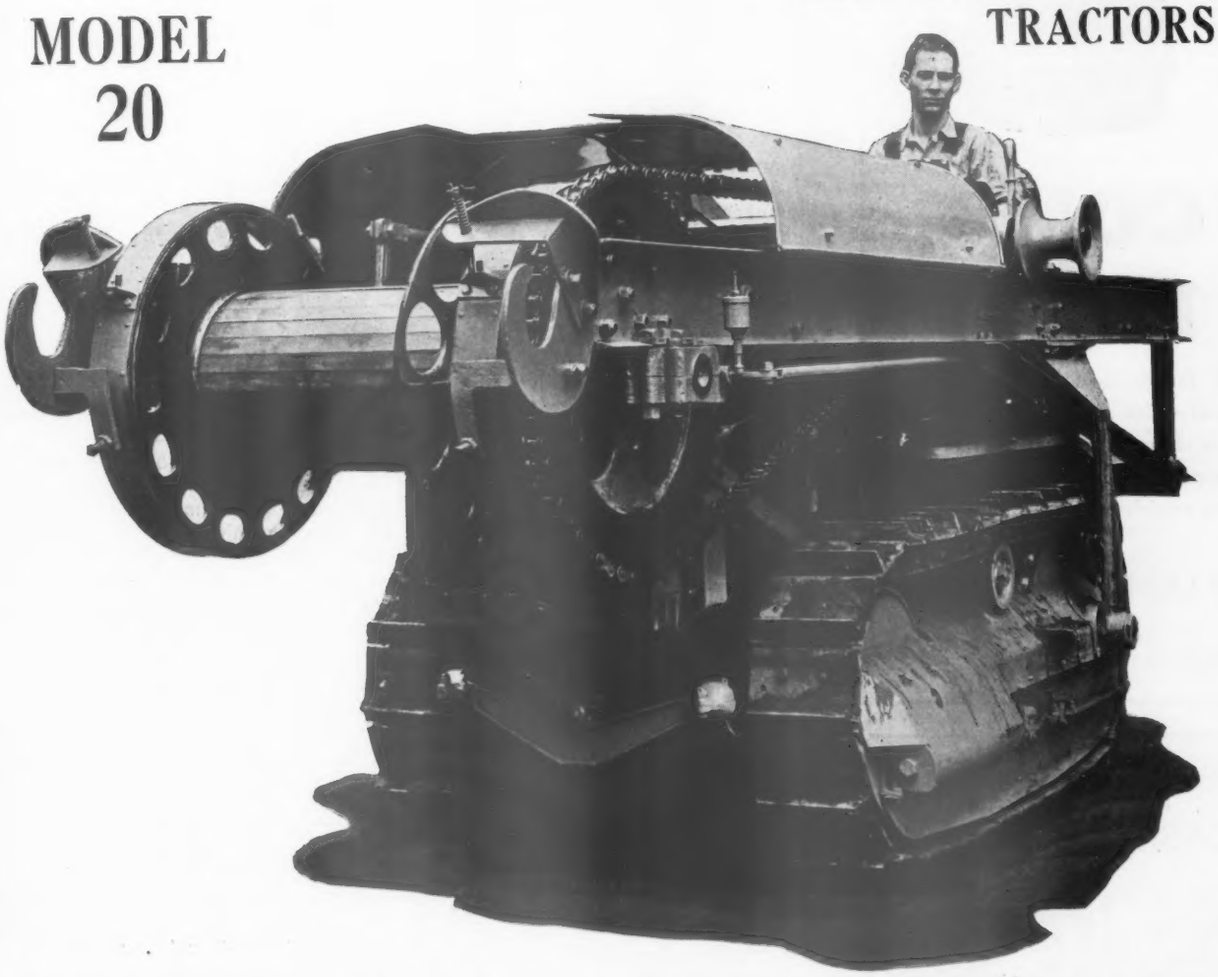
The portable shop shown above was built especially for the Oil Well Supply Company for use in installing Nicholson Thermic Syphons in boilers in the field. The shop consists of a complete welding outfit, both electric and acetylene, and an air compression for the operation of air driven tools. With this outfit, installations are made at the factory. The equipment is being used now in the Mid-Continent field and this service, which also includes general welding, is to be extended later to other fields. The Nicholson Thermic Syphon is the latest contribution of the Oil Well Supply Company to boiler improvement. Its advantages may be stated briefly as increased fire box heating surface, increased circulation, increased steaming capacity, increased general efficiency, reduced fuel consumption and reduced maintenance costs

Cardwell-Keltner Allsteel Winch

FOR USE ON

"CATERPILLAR" TRACTORS

MODEL 20



PROVEN THE MOST ECONOMICAL IN THE OIL FIELDS TODAY

QUALITY—All steel parts throughout—Minimum breakage—Demountable drums and sprockets—Low replacement cost.

"HYATT" BEARINGS—Insures least friction, full free release drum, long life, low up-keep.

"COTTA" TRANSMISSIONS—Four speeds, one reverse, overcoming changing lines when increased speed is necessary.

"DIAMOND" ROLLER CHAINS — Used throughout—The best chain made, without question.

DRUM—Wood lagged, one-piece steel drum. The wood lagging saves the cost of the equipment in cable during its life. Eliminates wickering.

OVERHANGING DRUM—Allows pulling direct from the drum to the crown block, making floor block unnecessary.

"CATERPILLAR" TRACTORS—They are the last word in quality construction and are good from 1,000 to 1,500 working days. Lowest priced repair parts of any tractor made and the fewest used per day's work.

THE ALLSTEEL PRODUCTS MFG. CO., Inc.

231 West English St. *There is a "Caterpillar" dealer in every country on the globe—Let us send you his name* Wichita, Kansas, U. S. A.

COMB INEX

A Steelex Seat and a Bronzex Ball — just the combination for use if you have wells where lodestone and floating sand are proving troublesome. Ask your dealer.

The Charles N. Hough Mfg. Company
FRANKLIN, PENNSYLVANIA

PARMACO CASING WAGONS

PRACTICALLY ALL FORGED STEEL—DESIGNED TO WITHSTAND THE HARDEST USAGE —PRICED RIGHT.

Send for Literature

PARKERSBURG MACHINE CO.
PARKERSBURG, W. VIRGINIA

PARKERSBURG MACHINE CO. PARMACO PARKERSBURG, W. VA. U.S.A.

The House of Courteous Service

Squeaks from the Bull Wheel

Whatever else may happen,
Now that the country's dry,
The sailor will have his port,
The farmer have his rye,
The cotton still has got its gin,
The sea-coast has its bar,
And each of us will have a bier,
No matter who we are.
—*The Bessemer Monthly.*

A woman in a small town, who was a conscientious churchgoer, was called on by another woman of the same church an hour or so before church time. She found her seated in a small back room putting the finishing touches on a new dress which she wished to wear to church that morning.

"What are you hold up in this back room for?" asked the caller. "Don't you suppose God can see you sewing in here?"

"Yes, I do," smiled the worker. "But he won't make half the talk about it that the neighbors would if they saw me."

I'm going to pray that you may forgive Casey for having thrown that brick at you.

Mebbe yer Riv-rence 'ud be saving toime if ye'd just wait till Oi get well, and then pray for Casey.

So you're taking subscriptions to pay your way through college? You look pretty old to be going to college.

Oh, I've already been through, lady, but I'm still paying for it!

It was after the opera. The expensively dressed woman approached the broad shouldered man.

"If I am not mistaken," she said, "I have the honor of speaking to the renowned basso, have I not?"

He felt flattered. "And what can I do for you, madame?" he asked.

"I can't find my car," she answered pleasantly. "Would you be so kind as to call out 'Charlie' at the top of your voice?"

"Why are some women called Amazons?"

"Because they're so wide at the mouth."

It was obvious that Mr. Specknoodle had somthing on his mind.

His wife gave him a searching look over the top of her glasses as he paced up and down in front of the fire.

"Amelia," he said suddenly, "I was reading an article in the paper, yesterday and—er—it said that women required more sleep than men."

"Oh?" observed Amelia, a shade suspiciously.

"Er—yes," continued her spouse, "so I thought—er—p'r'aps you'd—er—better not wait up for me tonight."

Little Girl: And what is a stork, mother?

Mother: A bird of chance, my dear.

I saw you kiss sis in your Ford roadster last night.

S-sh! Here's a quarter.

And here's 10 cents change. I only charge fellows with Packards a quarter.

"I have a lot of sympathy for the woman who is often tempted."

"My sympathy is all for the woman who isn't."

A man was amusing himself by trying all the penny-in-the-slot machines at a fair.

"Look here," he said to the owner of a nearby booth, pointing to the line of machines, "that one is to try your weight, the next your height, that one your strength, the next your sight, the one over there your lungs, and now I've got a penny in this thing, but I don't see what it's for."

"That, gov-nor?" replied the booth owner. "Oh, that one's to try your temper."

"What do they mean by the 'witching hour'?"

"Don't you know? That's the hour when the wife greets you with 'Which story is it this time'?"—*Tid Bits.*

Once upon a time a man got up early on Sunday morning to let the iceman in, and not being able to find his bathrobe he slipped on his wife's kimono. When opened the door he was greeted with a nice big kiss by the iceman. And the only way he could figure it out was that the iceman's wife had a kimono just like the one he had on.—*Yellow Strand.*

"I'm a dairy maid in a candy kitchen."

"What do you do?"

"Milk chocolates."

Jones was pridefully exhibiting his thoroughly electrified house to his weekend guest Brown. "How about a little game of pool?" he asked. Brown was agreeable. Jones stepped to the wall, pushed a button, whereupon the panels opened and a pool table with balls and cues slid noiselessly into the room. The game over, the host proposed a bite to eat. The touch of a button brought up through the floor a table all spread for the repast. "You must be travel-weary," said Jones, "can I provide a bath for you?" Brown said a dip would be most welcome. Jones pushed another button, which as by magic produced a beautiful porcelain bath-tub—also a shriek. It happened to be Mrs. Jones' bath hour.—*Pure Oil News.*

SKILLED SUPERVISION GUARANTEES THE QUALITY OF GULF PRODUCTS

COASTAL AND PARAFFINE CRUDES
GASOLINE — LUBRICATING OILS
NAPHTHA — GAS — OILS
WAX — PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

GULF REFINING COMPANY

General Sales Offices

PITTSBURGH, PA.

District Sales Offices

New York Boston Philadelphia Louisville Atlanta Houston New Orleans

Ocean Terminals

Boston (Beverly), Mass.
Providence, R. I.
New York Harbor (Bayonne, N. J.)
Jacksonville, Fla.
Port Tampa, Fla.
Mobile (Magazine Point, Ala.)
Philadelphia (Girard Point, Pa.)
Charleston, S. C.
Savannah, Ga.
New Orleans (Gretna, La.)
Port Arthur, Texas
Galveston, Texas

INDEX TO ADVERTISERS

J. S. Abercrombie Company..... 127
Acme Fishing Tool Company 142
Acme Gas Cleaner Company 86
Ajax Iron Works .....
Alco Oil Tool Company .....
Allis-Chalmers Manufacturing Company
Allsteel Products Company 151
Alten's Foundry & Machine Works .. 25
Aluminum Company of America .....
American Association of Petroleum Geologists .....
American Cable Company .....
American Hammered Piston Ring Co..
American Telegraph & Telephone Company .....
American Steel Works .....
American Well Works 142
Andrews Steel Company 65
B. K. Appleman .....
Paul Arbon Company .....
Ash Grove Lime & Portland Cement Company .....
Athey Truss Wheel Company .....
Axelson Machine Company..Fourth Cover

Baash-Ross Tool Company 9
Baker Oil Tool Incorporated..... 30
Baldwin Chain Company .....
William S. Barnickel & Company ....
Bartlett-Hayward Company .....
Bartlesville Supply Company .....
Beaumont Iron Works .....
Beebe Brothers .....
Bessemer Gas Engine Company .....
Bethlehem Steel Company 12
Boykin Machinery & Supply Company
The Brewster Company 113
Bridgeport Machine Company 24
Broderick & Bascom Rope Company..
Buckeye Traction Ditcher Company..
Buffalo Bolt Company 137
Burns Tool Company 138
Butler Manufacturing Company 66
A. M. Byers Company .....
Byron Jackson Company 4-41

Cambridge Instrument Company .....
Cameron Iron Works 54-55
Phillip Carey Company .....
Central Alloy Steel Corporation .....
Chain Belt Company .....
Chaplin-Fulton Mfg. Company..... 56
Chicago Bridge & Iron Works .....
Chicago Pneumatic Tool Company ....
Clark Brothers Company 13
Climax Engineering Company 82
Coastal Oil Finding Company 144
Colona Manufacturing Company .....
Columbia Nut & Bolt Company .....
Columbian Steel Tank Company ....
Continental Motors Corporation.....121
Continental Supply Company 84-85-88
Fred E. Cooper .....
Cooper-Bessemer Corporation 79
Crausbay Supply Company.....144
Crescent Belt Fastener Company ....
Curtis & Curtis Company ....
Cyclone Fence Company .....

D. & B. Pump Supply Company ....
Darling Valve & Manufacturing Co... 27
E. M. Dart Manufacturing Company..143
Diamond Drill Carbon Company 143
Disc Bit Division Byron Jackson Company .....
Dragon Manufacturing Company ....
Drane-Humphrey Company, Inc. ....
S. R. Dresser Mfg. Company 87
The Drillometer Company .....
Dunn Division, Byron Jackson Co. ..

E. I. du Pont de Nemours & Co., Inc. .....
Economy Pump Company .....
Economy Pump & Oil Tool Co. .....
E. H. Edwards Mfg. Company .....
Electric Controller Mfg. Company ....
Elliott Core Drilling Company .....
Emsco Aircraft Corporation .....
Emsco Derrick & Equipment Co. 109

Fenwick-Reddaway Manufacturing Company .....
Fort Worth Laboratories 144
Franklin Valveless Engine Company ..105
Frederick Iron & Steel Company....
Frick-Reid Supply Corporation 98

Garlock Packing Company 137
Gardner-Denver Company 145
Gaso Pump & Burner Manufacturing Company 3
General Electric Company 76
B. F. Goodrich Rubber Company ....
H. P. Gott Manufacturing Company..128
Gray Tool Company .....
Greene, Tweed Company .....
Guiberson Corporation 95
Gulf Publishing Company 130
Gulf Refining Company 153
Gulf States Utilities Company 43

Halliburton Oil Well Cementing Company 10
Erle P. Halliburton Company .....
Hardway & Cathey 144
Haynes Stellite Company .....
Harrisburg Pipe & Pipe Bending Company .....
Harrisburg Pipe & Pipe Bending Company of Texas .....
Hazard Wire Rope Company..... 8
Hercules Motors Corporation 129
Hercules Supply Company .....
Hercules Tool Company .....
Heydrick Mapping Company 144
Hill, Hubbell & Company 116-117
Hinderliter Tool Company .....
Hirsch, Brown & Susman 144
Charles N. Hough Manufacturing Co...152
Howard Smith Company .....
Houston Engineers .....
Houston Ready-Cut House Company.. 65
Hughes Tool Company .....Front Cover
Humble Oil & Refining Company ....
Hyatt Roller Bearing Company .....

Imperial Royalties Company .....
Ingersoll-Rand Company .....
International Cement Corporation ....
International Derrick & Equipment Company 51
International Petroleum Exposition..20-21
International Supply Company .....

Jarecki Manufacturing Company .....
Jensen Brothers Manufacturing Co. ..134
S. M. Jones Company .....
Jones & Laughlin Steel Corporation... 11

Kennedye-Plumb Corporation .....
Kerotest Manufacturing Company 15
Keystone Pipe & Supply Company ..126

Landis Machine Company ....
Larkin & Company .....
Layne & Bowler Company 17
LeBus Rotary Tool Works .....
Lincoln Electric Company .....
Linde Air Products Company .....
Link-Belt Company .....
Lucey Products Corporation .....
Lufkin Foundry & Machine Company..

MacClatchie Mfg. Company .....
Maintenance Engineering Corporation.142
McCollum Exploration Company 144
J. H. McEvoy Company 75
Maloney Tank Manufacturing Co. ...140
Martin Wagon Company .....
Mason Regulator Company .....
Metric Metal Works 49
Miller Combination Bailer & Pump Company .....
Robert J. Miller Company .....
Mission Sales Company .....
Missouri Portland Cement Company ..
Lee C. Moore & Company 5
Munger Oil Information Service .....
Murray Brooks Hardware Company..
Murray Tool & Supply Company ....

National Petroleum Engineering Co...142
National Supply Companies 16
National Tank Company 73
National Transit Pump Machine Company .....
National Tube Company .....
New Jersey Asbestos Company .....
Norris Brothers .....
Norvell-Wilder Hardware Co. 18
Nye Tool & Machine Works 7

O. C. S. Manufacturing Company 143
Oakite Products, Inc. .....
O'Brien Steel Construction Company..
Oil Well Supply Company..... 32
Oil Tool Division Byron Jackson Co.
Oklahoma Gas & Electric Company ..124
Alfred S. Olmstead .....
Oxweld Acetylene Company .....
Parkersburg Machine Co. 152
Parkersburg Rig & Reel Company .. 97
Patterson-Ballagh Corporation 29
Pattin Brothers Company 22
Peden Iron & Steel Company .....
Penberthy Injector Company .....
Petroleum Rectifying Company 93
Pittsburgh Des Moines Steel Company
Pittsburgh Equitable Meter Company.. 83
Pittsburgh Steel Products Company ..
Pittsburgh Valve, Foundry & Construction Company .....
Pratt & Whitney Company .....

Quaker City Rubber Company .....

Reading Iron Company .....
Reed Roller Bit Company .....Insert
Refinery Supply Company 86
Reagan Forge & Engineering Co. ....
Joseph Reid Gas Engine Company ..100
Republic Iron & Steel Company .....
Republic Supply Company 14-53
Rhodes Master Packing .....
E. B. Rowan .....

The Sawhill Manufacturing Company..143
Shaffer Specialty Company 19
Shaffer Tool Works 122
Sinclair Refining Company .....
S-K-F Industries .....
A. O. Smith Corporation .....
Smith Separator Company .....
H. C. Smith Manufacturing Company.. 28
Howard Smith Company .....
South Chester Tube Company .....
Southern Engine & Pump Company.. 82
Southern Mill & Manufacturing Co...
Spang & Company .....
Spang Chalfant & Company 6
Springfield Wagon & Trailer Co.....133
Standard Supply & Hardware Co. ....
Star Drilling Machine Company .....
Jesse R. Stone 144
Sullivan Machinery Company 120

Templeton, Kenley & Company.....
Texas Cyclone Fence Company.....
Texas Power & Light Co. ....Third Cover
Texas Sand & Gravel Company 144
Timken Roller Bearing Company 61
Titusville Iron Works .....
Triad Products Company .....
Trimont Manufacturing Company ....
Trumble Gas Trap Company .....
Twin Disc Clutch Company .....
Tyler Tube & Pipe Company 65

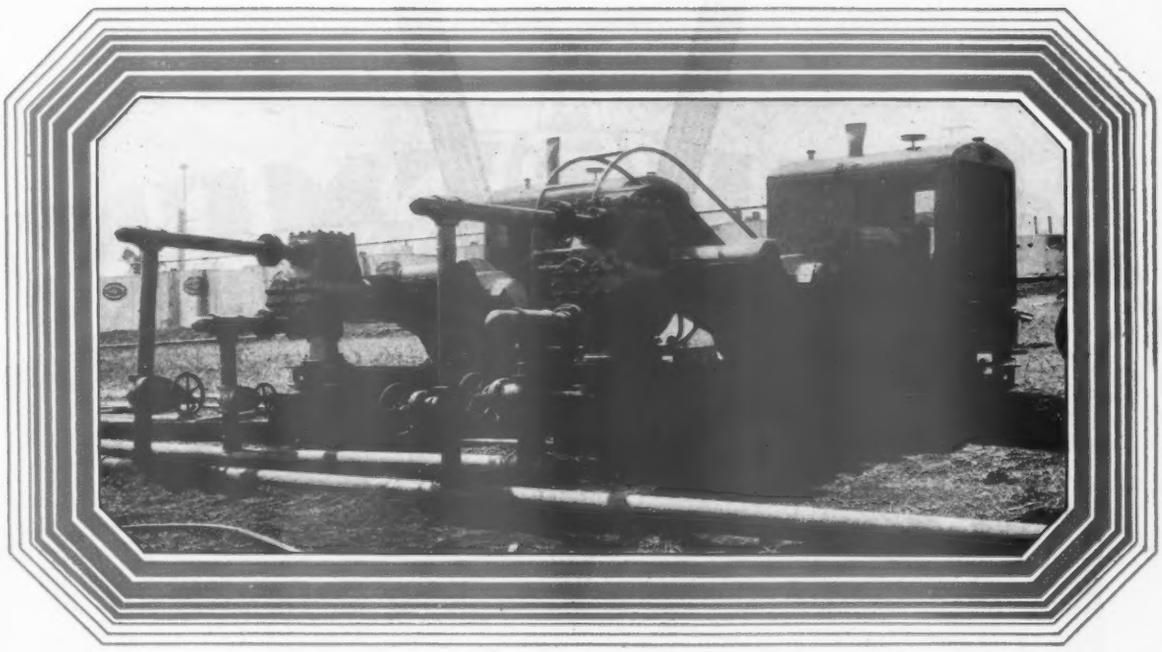
Union Carbide & Carbon Corporation
Union Wire Rope Corporation .....Inside Front Cover
United Gas Company 70-71
United Iron Works .....

Victualic Company of America .....
The Vez Company 23

Waukesha Motor Company 148
John F. Weinzierl 144
Westinghouse Electric & Manufacturing Company 26
Wichita Falls Motor Company .....
West Texas Utilities Company .....
Wickwire-Spencer Steel Company....
Wico Electric Company .....
Wiemann-Kemmerer-Wright, Inc. ....
J. H. Williams & Co. 123
Williamsport Wire Rope Company....
Wilson Oil Tools Corporation .....
Wilson-Snyder Mfg. Corp. 141
Wilson-Supply Company .....
W-K-M Company .....
Word Specialty Mfg. Company..... 59
Wright Specialty Mfg. Company ....
Wyatt Metal & Boiler Works 139

Yale & Towne Manufacturing Co.....
Young Engine Corporation .....

Zero Hour Torpedo Company .....

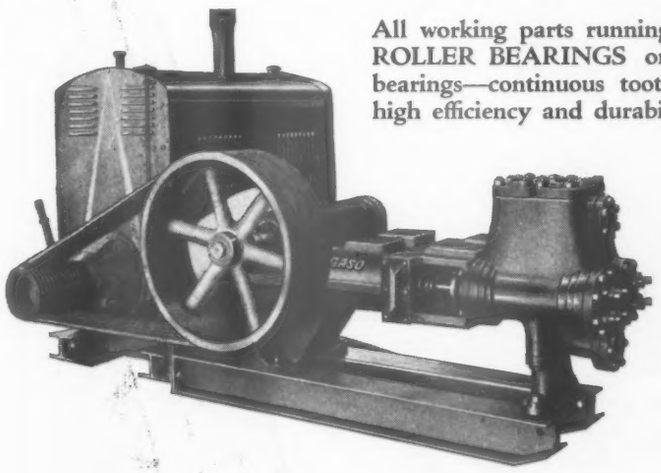


A Portable Pumping Unit

For Large Capacities and High Pressures

The Gaso Fig. 710 Enclosed Power Pump—with V-Rope drive from a Buda 85 H.P. gas or gasoline engine—mounted on H-beam skids for easy transportability—constitutes an ideal unit for semi-permanent and permanent pipe line stations. Interchangeable liner fluid end gives capacities from 54 barrels per hour at 1400 pounds working pressure to 502 barrels per hour at 300 pounds pressure.

All working parts running in an oil bath—TIMKEN TAPER ROLLER BEARINGS on pinion shaft—babbitt lined main bearings—continuous tooth herringbone gears—are factors in high efficiency and durability.



Write, wire or phone for full information

GASO PUMP & BURNER MFG. COMPANY
Tulsa, Oklahoma

535 Fifth Ave., New York City
210 Petroleum Bldg., Fort Worth, Texas

GASO PUMPS
for every oil industry need

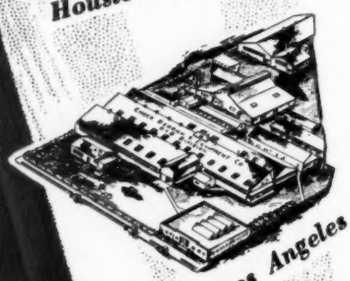
★ ACHIEVEMENT

1923 marked the beginning of the EMSCO DERRICK AND EQUIPMENT COMPANY. It is the only organization that manufactures—UNDER ONE MANAGEMENT—a complete line of Oilfield Steel Derricks, Oil Well Drilling Machinery, Deep Well Pumps, Sucker Rods and Production Equipment.

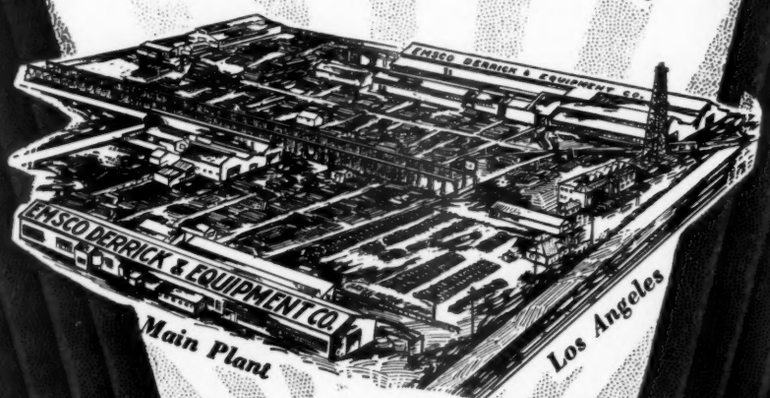
No. 4—of a series on the history and development of the giant chain of EMSCO organizations. EMSCO AIRCRAFT CORPORATION factory rapidly nearing completion. Arrangements now being made with distributors throughout the world for handling the COMPLETE LINE OF AIRCRAFT TO MEET ALL REQUIREMENTS.

Houston, Texas

Dallas, Texas


Los Angeles

London, England



Main Plant

Los Angeles

EMSCO AIRCRAFT CORPORATION
DOWNEY, CALIFORNIA

★ACHIEVEMENT (Noun) A noteworthy and successful action or a distinguished feat. (Heraldry) An escutcheon.

"A Steinway?" asks the guest; and the hostess glows with pride. "Halliburton Cementing?" asks the curious one; and the operator smiles his assent. No further discussion is necessary.

HALLIBURTON

OIL WELL CEMENTING COMPANY

DUNCAN, OKLAHOMA

If you want to produce

MORE OIL

use a

STANCLIFF SCREEN

THE MORE OIL SCREENED, THE MORE MONEY MADE

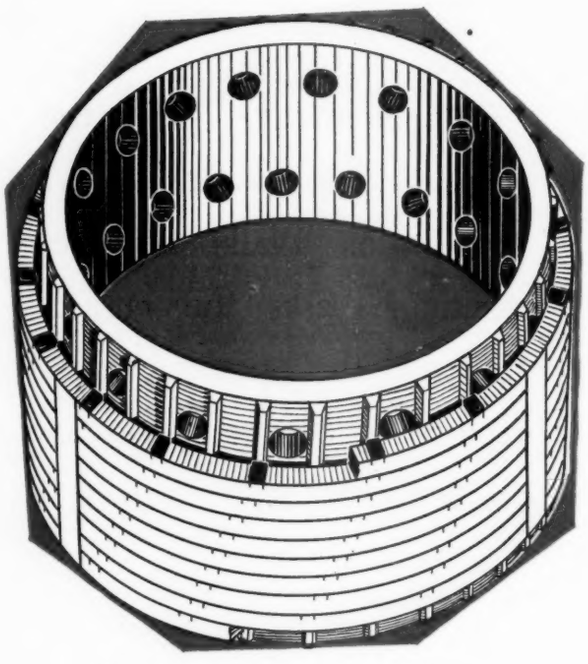
The screen is the point of contact between OIL SAND WHICH HAS POTENTIAL VALUE and OIL WHICH HAS REAL VALUE.

Therefore of all the pieces of equipment used in the production of oil, the screen is one of the most important. Upon its ability to SCREEN ALL THE OIL and to SCREEN OIL RAPIDLY, depends the amount of money an oil operator makes.

REASONS WHY THE STANCLIFF SCREENS MORE OIL

NOTE IN THE ILLUSTRATION that the entire area of the pipe is screening surface. Numerous practical oil men who have made fair comparisons know from actual experience how much faster oil screens where the entire surface admits the oil than where only small perforations admit the oil.

The reasons for this are immediately evident to the engineer. The increased screening area reduces inlet velocity thereby reducing fluid friction and allowing greater volume of fluid flow through the screen at a given pressure in the well. This reduced velocity reduces sand cutting and gives longer life to the screen.



Cross Section Stancliff Patented Well Screen

SPECIFICATIONS

1. The outside diameter of the Stancliff Well Screen is less than the diameter of the couplings and can be set through any pipe that will pass the couplings.

2. Ribs on pipe allow .061 of an inch for oil circulation and permit free flowing of oil into pipe, after straining through wires. The ribs strengthen the pipe as much as perforations have weakened it . . . AN IMPORTANT ADVANTAGE OVER OTHERS.

3. Square wire is used to give greater life without "sanding," because sand must cut through entire width of wire before affecting screen.

4. The square wire is lugged from top to bottom at regular intervals, uniformly spacing and bracing wire at bottom as well as top.

5. By varying spacing lugs on wire, we make strainer to screen any size sand . . . on any size or kind of pipe.

WIRE FOR FACTS AND USERS

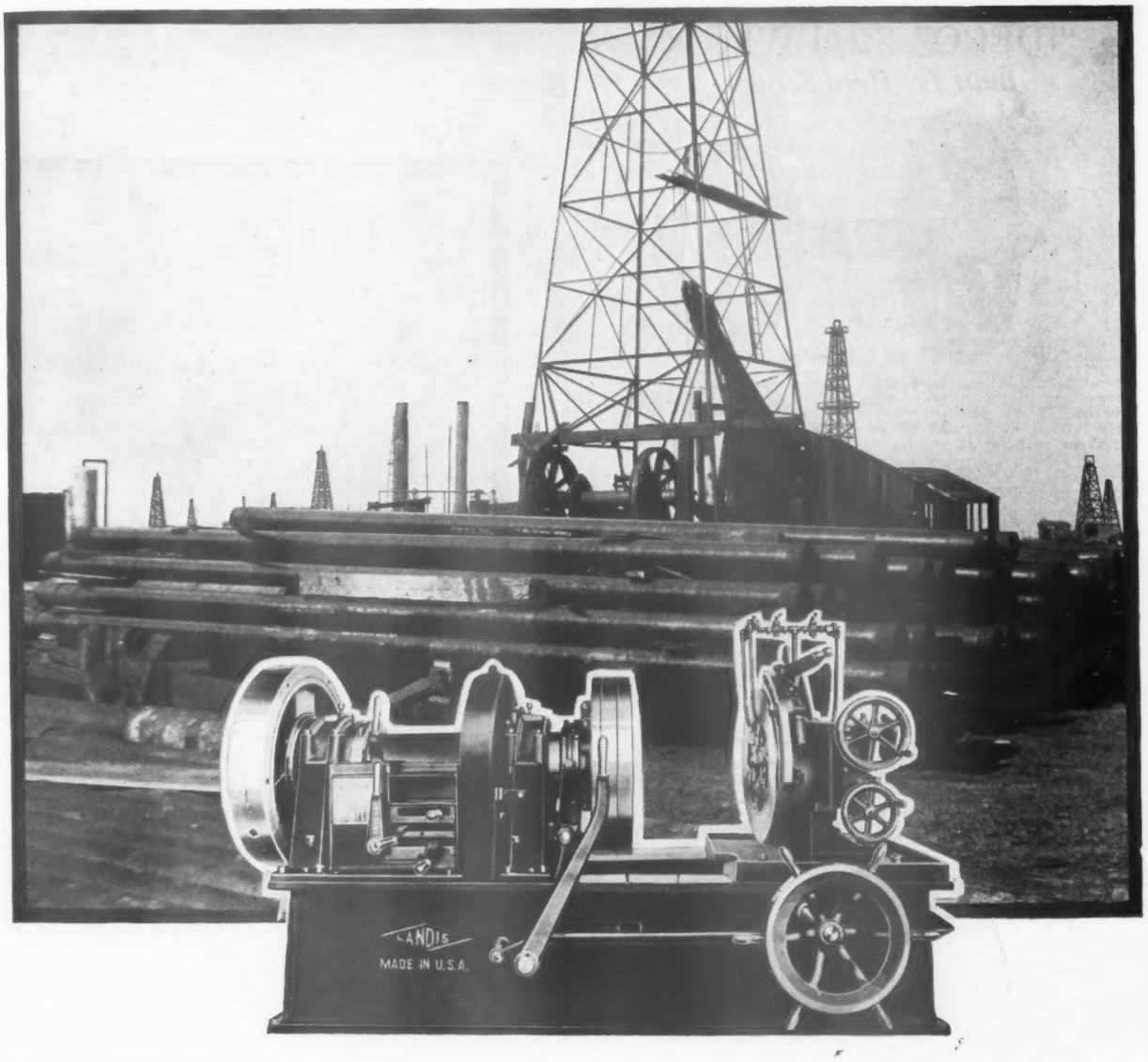
TO GET MORE OIL OUT OF A WELL AND GET IT FASTER . . . USE A STANCLIFF "MORE OIL" SCREEN.

HS

HOWARD SMITH COMPANY

2412 Railroad Avenue at Sawyer Street

Phone P-0131 HOUSTON TEXAS P. O. Box 688



Landis Pipe Threading and Cutting Machines are designed for Oil Country threading.

They are rigid enough to withstand heavy duty service for years—fast enough to out-produce other pipe threading machines without sacrificing their naturally low maintenance cost—and, above all else, accurate enough to turn out cleanly cut, correctly tapered threads that meet A. P. I. Specifications to the letter.

Because they will deliver *more good threads* per dollar invested, it will pay you to investigate the Landis Line today.

Write for Catalogue No. 31

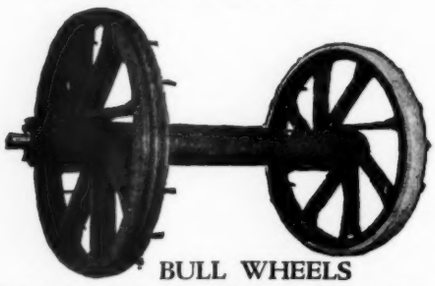
LANDIS MACHINE COMPANY, Inc.

WAYNESBORO, PENNA., U. S. A.

Represented in the Domestic Oil Fields by: Colcord-Wright Machinery and Supply Co., St. Louis, Mo.; D. S. Mair Machinery Co., Houston, Tex.; Woodward Wight & Co., New Orleans, La.; Herberts Machinery & Supply Co., Los Angeles; Herberts Moore Machinery Co., San Francisco, Calif.; Hendrie & Bolthoff Mfg. & Supply Co., Denver, Colo.

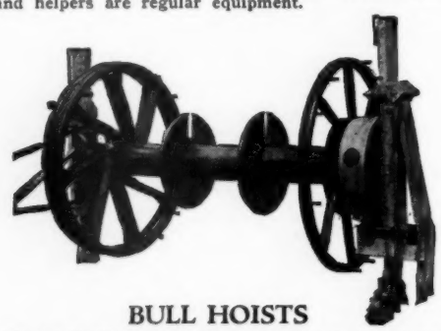
"IDECO" Steel Wheels

Built for Hard Service



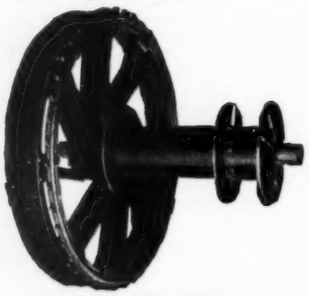
BULL WHEELS

"Ideco" Bull Wheels have eight channel spokes, a deep "V" groove tug rim with rolled edges, wood or steel faced brake wheels, "Ideco" patented removable gudgeons and 13′ 6″-16″ or 18″ O. D. shafts with ⅜″ or ½″ walls. Turning pins, rope dogs and helpers are regular equipment.



BULL HOISTS

The Bull Hoist utilizes the standard type of tug wheel, shaft and removable gudgeons, the brake has been changed to a casting 42″ in diameter equipped with Johns-Manville Brake Lining. The elimination of the antiquated type of brake has brought greater flexibility of operation, more perfect control, speeded up drilling, gives more floor room and eliminates all of the disadvantages of the old type of brake.



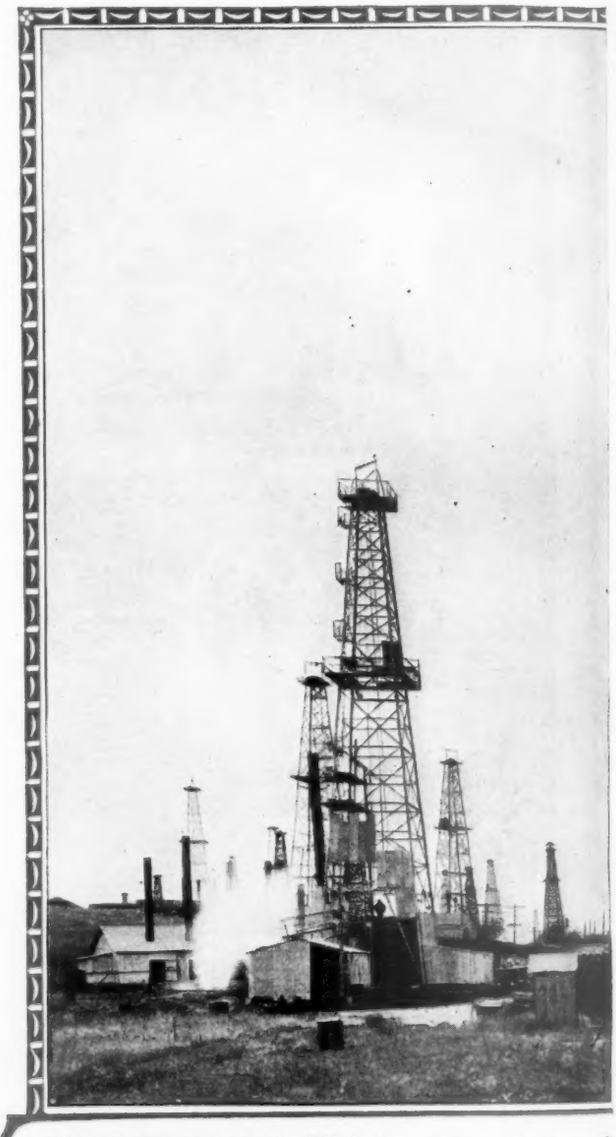
CALF WHEELS

Made with wood or steel face brake wheels, "Ideco" Calf Wheels have earned a reputation for great strength and long service. A 90″ split sprocket, "Ideco" patented removable gudgeons and 16″ or 18″ O. D. Shafts are standard.

BAND WHEELS

Having superior strength and balance with a minimum of vibration "Ideco" band wheels are furnished in a variety of sizes. Their principal features are: wood or steel face rims, double channel arms, double riveted construction, a one-piece steel hub, and the "Ideco" deep "V" groove double steel tug rim with rolled edges.

All the Above Wheels Furnished Galvanized or Painted



"IDECO" Wheels are designed, mands of severe oil pled with our field experience of what the mendous strength. They are free from vibr

The Internatio

Columbus, Ohio

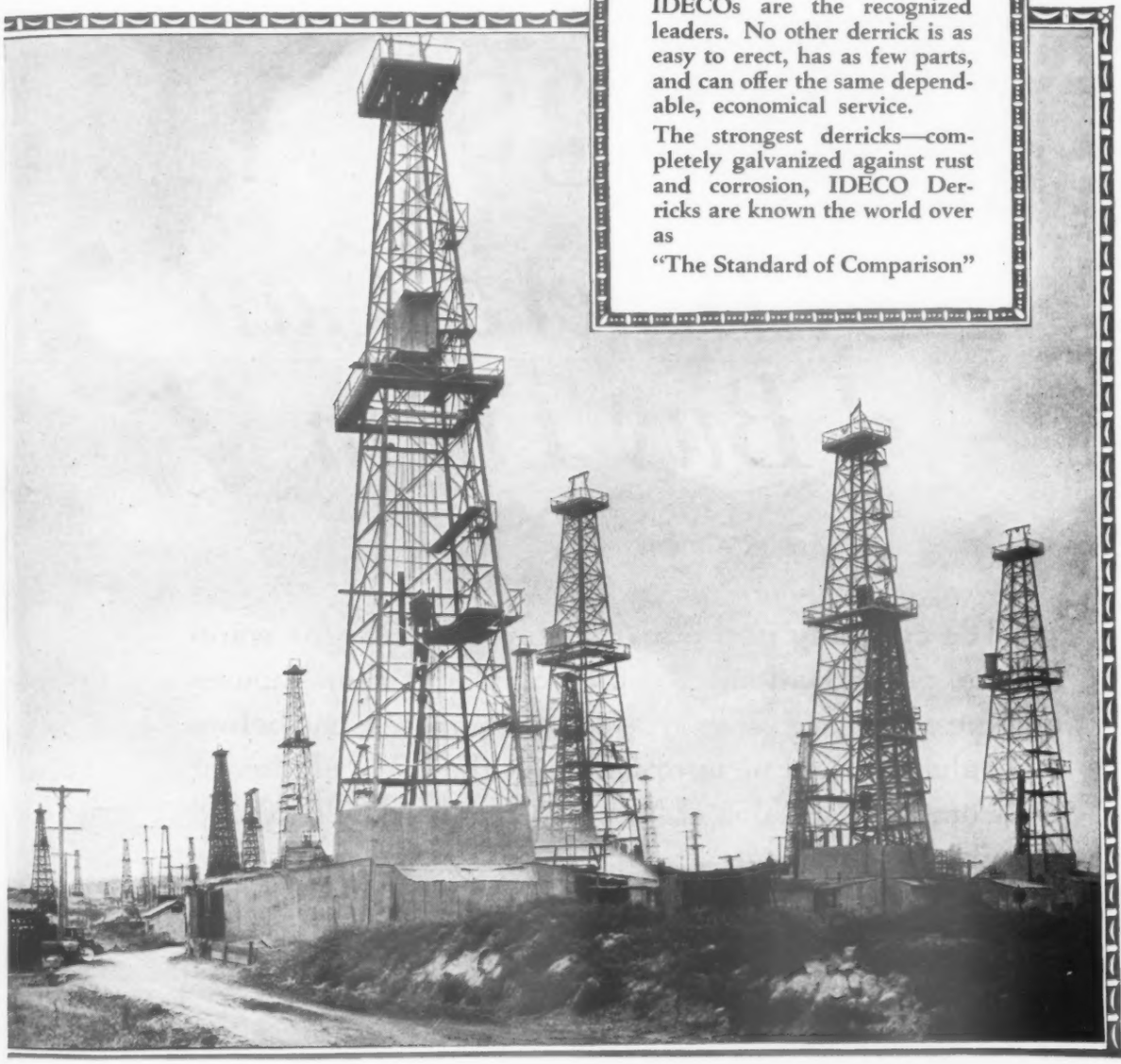
Plants: Columbus, Delaware, Ohio; Torrance, California; *Sales* Maracaibo, Venezuela; *Warehouses and Yards:* Columbus, Ohio; El Dorado, Wichita Heights, Kansas; Bakersfield, Taft, Torrance, Shreveport, Lake Charles, Louisiana; El Dorado, Smackover,

Export Representation:

WHEREVER Steel derricks are used, there IDECOs are the recognized leaders. No other derrick is as easy to erect, has as few parts, and can offer the same dependable, economical service.

The strongest derricks—completely galvanized against rust and corrosion, IDECO Derricks are known the world over as

"The Standard of Comparison"



built and assembled, to the last rivet, in our own shops. They meet the most rigid de- country service. Their construction is based upon sound engineering principles—cou- oil producer wants. "Ideco" Wheels are built of the finest materials and possess tre- ation, run true and give years of service with little or no attention.

nal Derrick & Equipment Co.

Los Angeles, Cal.

Offices: Columbus, Ohio; New York City, N. Y.; Detroit, Michigan; Dallas, Texas; Wichita, Kansas; Los Angeles, California; Tulsa, Seminole, Tonkawa, Drumright, Okemah, Wewoka, Maud, Sasakwa, Allen, Earlsboro, Oklahoma City, Oklahoma; California; Houston, Hebbronville, Big Spring, Merkel, Odessa, Pyote, Pampa, Borger, McLean, Mexia, Luling, Texas; Arkansas.

74 Trinity Place, New York City; Columbus, Ohio; Houston, Texas; Los Angeles, California.

428-W

OIL COUNTRY Buildings

Where Can I Buy Them ?

The company in the market for buildings for warehouses, pump stations, compressor plants, bunk houses and mess halls, or other types of lease houses, has before it a valuable fund of information in the 1929 edition of the Composite Catalog of New and Standard Oilfield and Pipe Line Equipment.

Not less than eight manufacturing companies who make such houses and buildings describe them in the Composite Catalog and list the nearest sales point to you.

The classified index of the Composite Catalog shows several hundred different types of equipment described, and more than 3,000 individual listings of equipment by manufacturers. It is the greatest conserver of time and effort you have ever seen when you are studying data for purchase.

The Gulf Publishing Company

(Catalog Division)

HOUSTON

"Just as it leaves the mill."

Every reputable maker of pipe takes pride in his product—rigid tests, close inspection, assures the buyer of a perfected product—of sharp, accurate, clean threads.

Why, then all the trouble, delays, and rethreading necessary when the pipe reaches you?

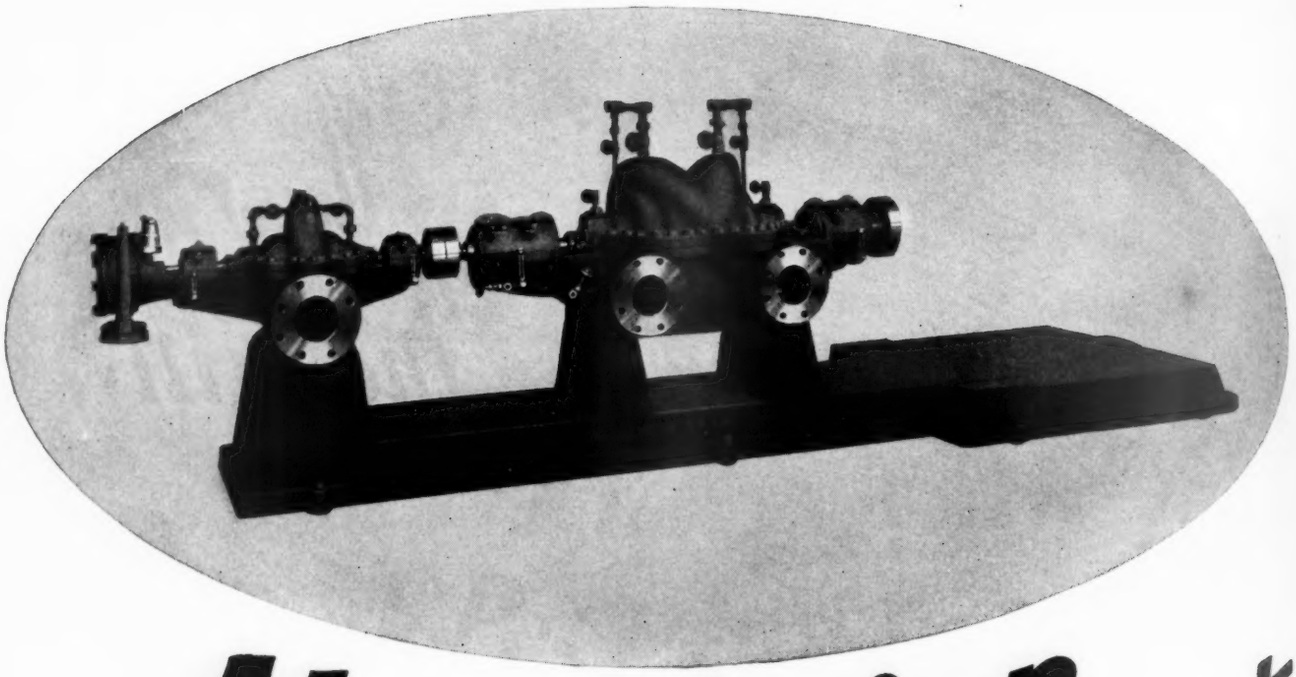
The logical thing to do is to protect the pipe and couplings so that the ends and threads are perfect—keep out all the dirt and sand—*and that is just what Colona Thread Protectors do*—the pipe reaches you *just as it left the mill*—

COLONA MANUFACTURING COMPANY
Pittsburgh, Penna.

Specify this added service—you are entitled to perfect pipe, and Colona is available to every manufacturer.

(Patented)

PIPE THREAD
COLONA
PROTECTORS



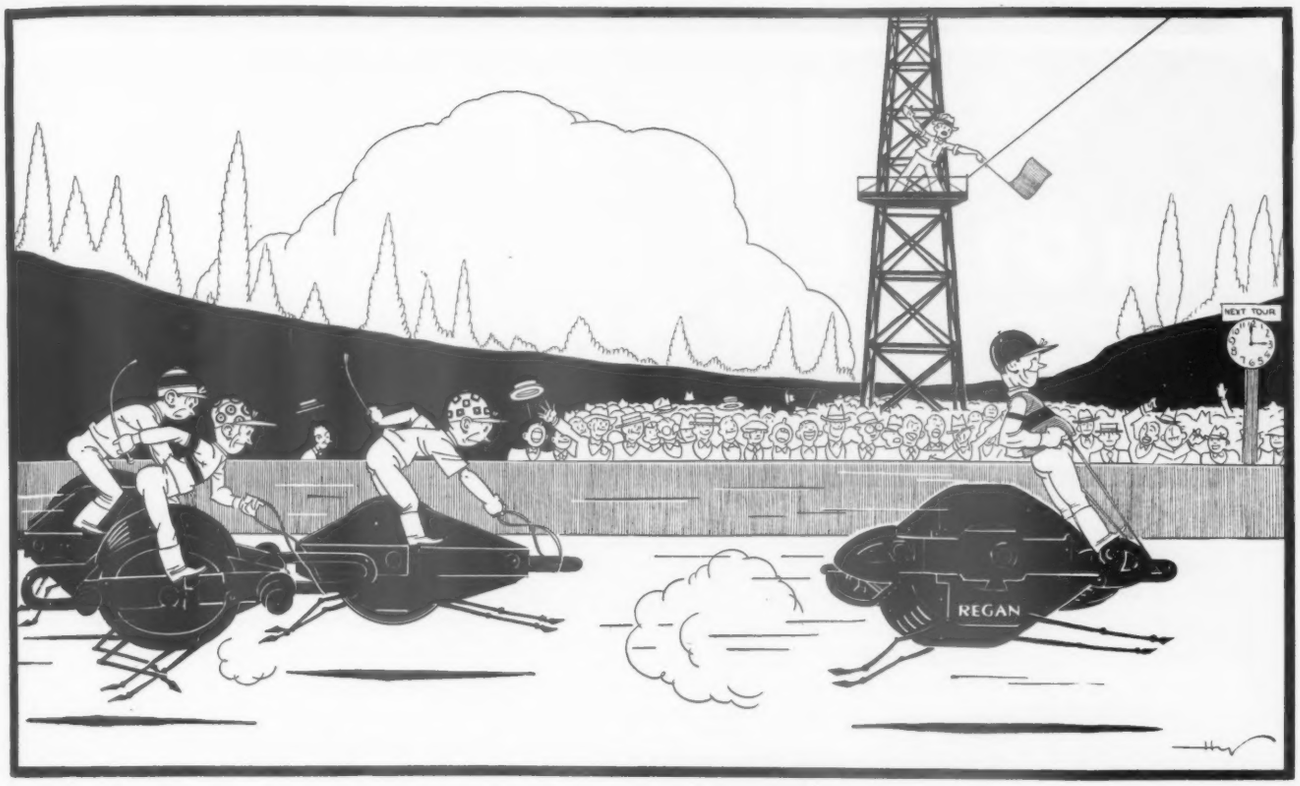
Absorbtion Plant PUMPS

This distinctive Byron Jackson gasoline absorption plant unit consists of four centrifugal pumps with only five stuffing boxes, two of which are hot. This unit handles lean and fat oil, water and gasoline. These pumps are mounted on one extended cast iron base plate with two flexible couplings and require only one driver with control apparatus. A big saving in motor or steam turbine investment is thus effected. Built in the light of many years of experience, the simplicity of this Byron Jackson unit immediately commends itself to the practical operator. This is but one example of the special equipment this company builds for oil refineries. In addition, pipe line and water service pumps are offered for every conceivable use.

SINCE 1872
BYRON JACKSON CO.
Factories: BERKELEY, Los Angeles, Visalia, Calif.
Branches: NEW YORK and CHICAGO
San Francisco, Portland, Salt Lake, Tulsa, Dallas, Phoenix

BYRON JACKSON

CENTRIFUGAL PUMPS FOR EVERY SERVICE



Regan WINS

the fastest Block in the field ...

Patented

Regan
Forge & Engineering Co.
Oil Field Equipment
Plant and General Offices:
SAN PEDRO (Los Angeles Harbor) CALIFORNIA, U. S. A.

New York Office
75 West Street
Wm. Braat, Manager

Mid-Continent Office
Dallas, Texas
501-2 Marvin Bldg.

Representatives

Oklahoma City, Okla.
2420 W. 21st St.

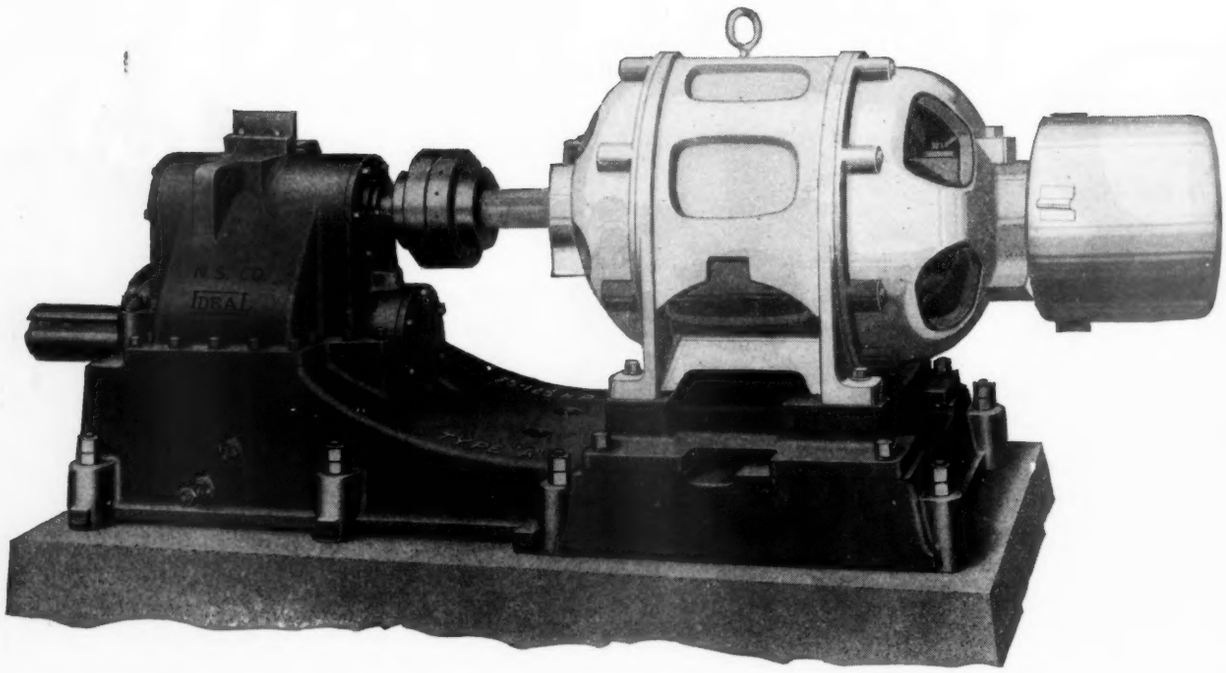
Pecos, Texas
P. O. Box 444

Maracaibo, Venezuela
Wm. Adams, care Amer. Consul

IDEAL
ROLLER BEARING REDUCTION GEARS
TYPE "A"

FOR ELECTRIC POWER SERVICE

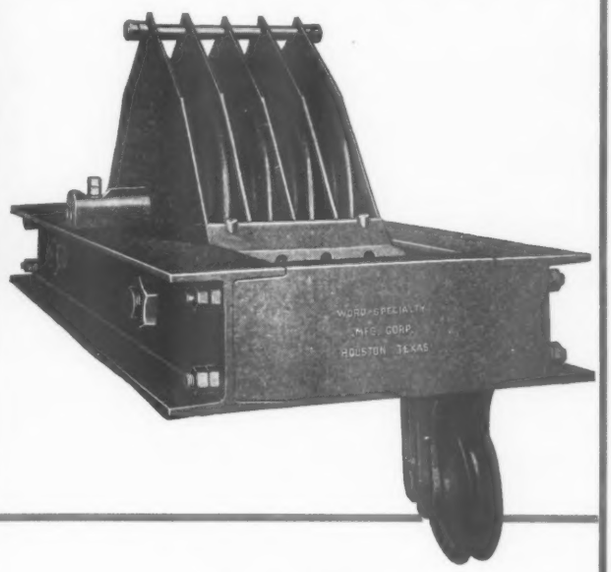
75—125	H. P.	Rotary Drilling
25—65	H. P.	Cable Tool Drilling, Heavy Duty Pumping and Cleaning Out with Standard Rig
20—50	H. P.	Heavy Duty Pumping and Cleaning Out with Standard Rig
15—35	H. P.	Light Duty Pumping and Cleaning Out with Standard Rig



Descriptive Bulletin
No. 16UA
Free On Request

THE NATIONAL SUPPLY COMPANIES

"THE BEST KNOWN WORD IN THE OIL FIELDS"



WORD CROWN BLOCK

Embodies These Features

Each sheave oiled separately (alemite system). No "Hot Boxes" or loose bolts. Main shaft supported on both ends of spacer plates.

Heavily galvanized to prevent rust or corrosion, fitted with special American Roller Bearings and equipped for Alemite positive pressure lubrication throughout. Simplest and most easily dismantled crown block ever made.

Approximate weight 3000 lbs. Write for pamphlet giving complete details of this Crown Block.

its Performance
lives up to
its Reputation

On Talbot and Markle No. 1 Ilfrey—5060 feet of 26 lb. seamless steel casing was set with this

WORD CROWN BLOCK

using 7 lines. This job was accomplished with perfect precision and satisfaction. Well was drilled from grass roots to 5190 feet.

American Roller Bearings, Alemite Lubrication, Heavy Duty construction, simply and quickly adjusted to meet driller's requirements (loosen 2 bolts and slide cat line sheave on any part of crown block). Easily and quickly dismantled and re-assembled — only four bolts to pull and replace.

WHAT IT DOES FOR OTHERS
THE WORD CROWN BLOCK
WILL DO FOR YOU.

WORD SPECIALTY MFG. CO.

Day Phone
Preston 1927

MAIL ADDRESS P. O. BOX 276
HOUSTON, TEXAS

Night Phone
Hadley 1973

EVERY MINUTE OF EVERY HOUR

MacCLATCHIE

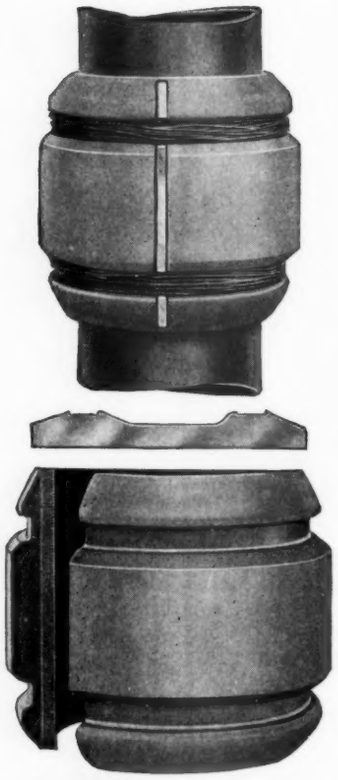
Pipe–Tectos

—will safeguard your drill pipe

. . . absolutely guaranteed to stay in place under normal conditions

. . . will wear longer, as the rubber is unexpanded

. . . easily removed when pipe is laid down—100% salvage value



"RUBBER protectors with the grip of STEEL"

MacCLATCHIE

Pipe–Tectos

—will speed up your drilling

. . . all rubber bearing surface

. . . quickly installed

. . . installed without breaking a tool joint

. . . no special installation tools to be lost between jobs

a bigger squeeze . . .

without a slip—the MacClatchie geared brake

. . . doubles the lever pressure

. . . compounded 2 to 1 against the "kick

. . . heavier steel bands

. . . greater braking surface

. . . easily adjusted

The MacClatchie Geared Brake is easily installed on any rotary drawworks drum.

destructive mud . . .

hasn't a chance with MacClatchie pump valves

. . . made of heat-treated alloys of finest quality

. . . one-piece construction

. . . adjustable washers

. . . precise workmanship

. . . years of record-breaking service ot their credit

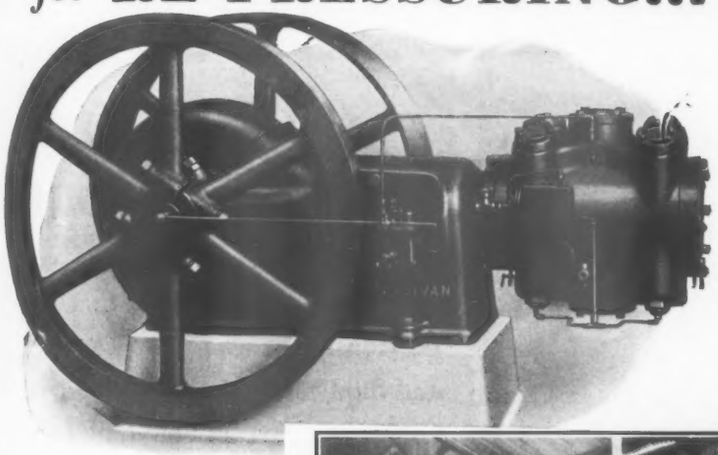
There are more MacClatchie Mud Pump Valves sold than any other make. Quality is responsible.

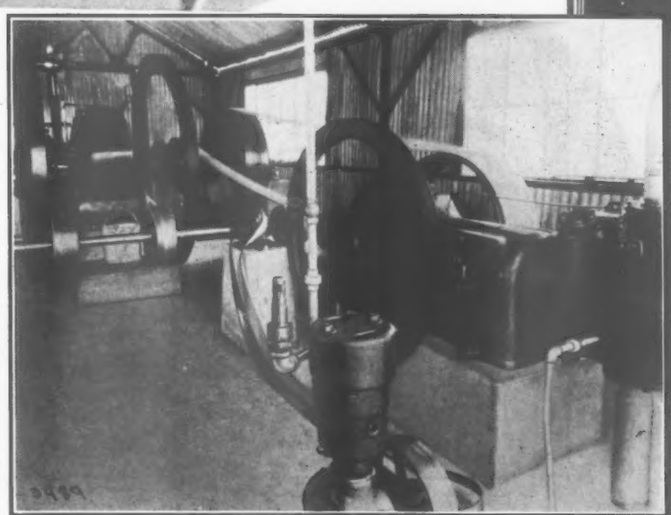
MacCLATCHIE MANUFACTURING COMPANY

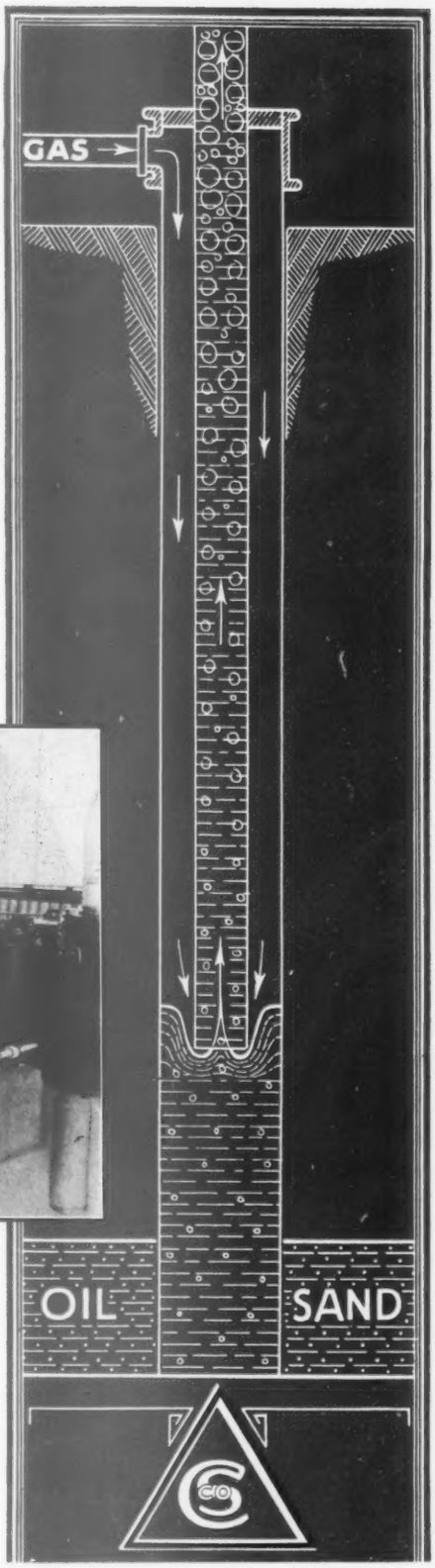
COMPTON - - - - - - - - CALIFORNIA

SULLIVAN

"WG-6" COMPRESSORS *for* RE-PRESSURING...







THE compressor illustrated here was installed on a 15 well lease near Breckenridge, Texas, for repressuring an old oil sand. Air from the compressor was introduced into two key wells. In three months the lease out-put increased 50% and the increase is continuing.

The ruggedness, simplicity and practically automatic character of these compact "WG-6" Compressors, adapt them peculiarly to service of this kind, where attendance is necessarily infrequent.

"If Continental Sells It . . . . . There Is No Better"

THE CONTINENTAL SUPPLY CO.

General Offices: ST. LOUIS. *Export Offices:* 74 Trinity Court, NEW YORK
London Offices: 316-17 DASHWOOD HOUSE, Old Broad Street, E. C. 2

THE CONTINENTAL SUPPLY CO., Ltd.
411 LANCASTER BLDG., CALGARY, ALBERTA, CANADA

CONTINENTAL

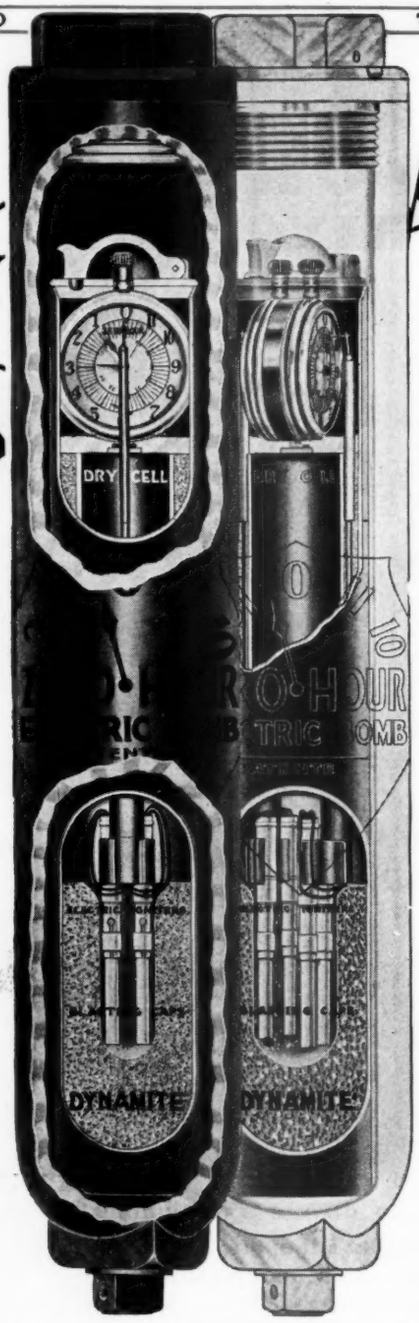
THE ONLY BOMB BETTER THAN A ZERO HOUR BOMB IS TWO ZERO HOUR BOMBS ... AND THAT'S THE ZERO HOUR DUPLEX

SUPER-DEPENDABLE..

..this new

Zero DUPLEX Hour Electric Bomb

Plug and Socket Connectors ... Improved Firing Pin



When you take a bomb that has previously proven 98% perfect and duplicate it, in the same container, you have a bomb that, compared with the former bomb, is 99 21/100% perfect. It is a fact that the chances of the new Zero Hour Duplex Bomb's failure to operate are so small that they are almost beyond computation in ordinary mathematics. To this extent, also, are eliminated dangerous cleaning-out jobs, over buried shots, with their attendant loss of production and burden of expense. The Zero Hour Duplex Bomb brings to oil well shooting such a perfect, modern detonating device that all other methods are rendered at once obsolete, and more costly and hazardous to your investment, by the risk entailed in using them. We are of the profound belief that no more perfect detonating device has ever been devised.

Zero Hour Bombs are obtainable through all principal torpedo companies

Every Zero Hour Duplex Bomb has a safety interval of from one to twenty-two hours.

Every watch is given several days running test, for accurate time-keeping.

Every electric igniter and every assembly of two igniters, connected in parallel to connector plug, at our factory, are galvanometer tested.

The firing mechanism of every bomb is tested, by substituting a flashlight bulb for explosive caps, first, at our factory, again at our distributing stations and, finally by the shooter at the well, just before the bomb is loaded.

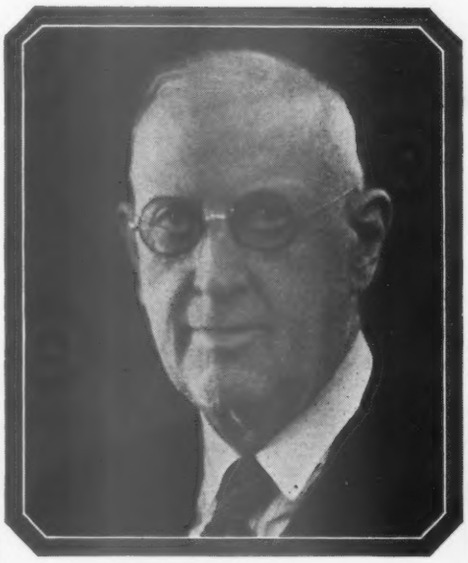
New "plug and socket" method of attaching electric igniters and blasting caps simplifies loading operations and assures perfect electrical connections.

Nearly 7,000 Zero Hour Bombs have been used. Not one has fired before the time for which it was set.

Zero Hour Electric Bomb

THE ZERO HOUR TORPEDO CO., 408 COSDEN BLDG., TULSA, OKLAHOMA

"Charley" Brant has used 'em all



Mr. C. P. Brant, ... Indianapolis, Ind., and an oil well he drilled with **UNION** Wire Rope in the Muskegon, Mich., field.

Mr. C. P. (Charley) Brant, who is still in the contracting business at 75 years of age, was one of the pioneer users of wire rope for oil well drilling. He has used all makes—but finds that UNION Wire Lines are the last word in *service*. His three strings of tools are equipped with UNION Wire Lines.

UNION WIRE ROPE CORPORATION
3 North Madison Ave., Tulsa Okla.

OIL COUNTRY SALES OFFICES
820 Kennedy Bldg., Tulsa

FACTORY
21st and Manchester, Kansas City

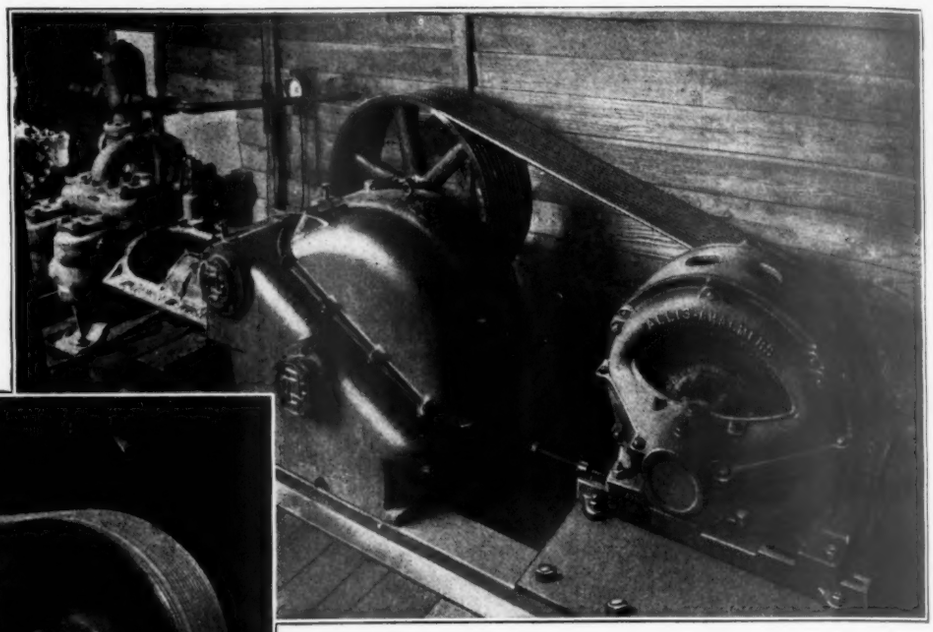
BRANCH OFFICE AND WAREHOUSE
Portland, Oregon

JARECKI MANUFACTURING COMPANY
Oil Country Distributors—Stocks at All Stores

UNION WIRE ROPE Corp.

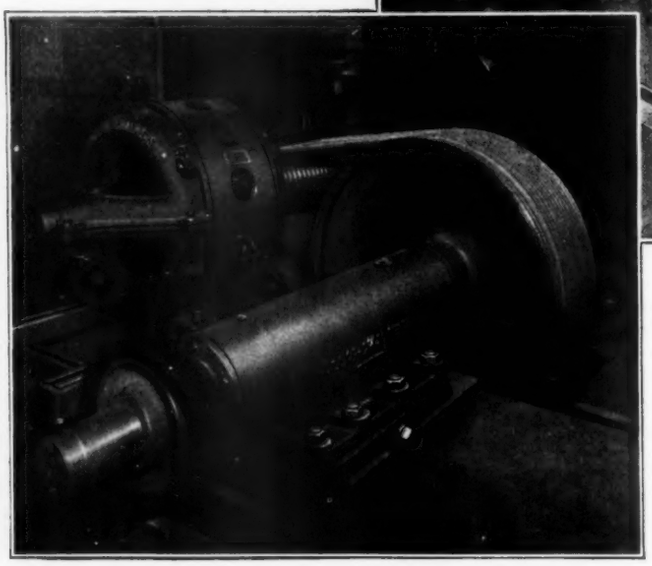
Trade Mark

UNION WIRE LINES



150 h.p. Allis-Chalmers Variable Speed Motor driving Slush Pump through Texrope Drive.

150 h.p. Allis-Chalmers Rotary Drilling Motor and Control driving Draw Works and Table through Texrope Speed Reducer.



Motors, Drives *and* Control *for* Rotary Rigs

Special motors and improved variable speed controls have led an increasing number of drilling contractors and oil operators to look to electricity as a means of decreasing their drilling costs.

Allis-Chalmers builds transformers, motors and controls for both cable and rotary drilling rigs. Special drilling motors have been developed with enclosed slip-rings and drip-proof frames as protection against splashing water or corrosive gases. Allis-Chalmers control equipment is completely assembled, wired and mounted on skids for easy handling. Rotary control consists of full magnetic type with predetermined acceleration or semi-magnetic type with drum control for speed regulation. Slush pump controls are of the semi-magnetic type.

Texrope units furnish the necessary speed reduction from the motor to the draw works. Texropes are flexible and furnish a shock absorbing medium between the motor and the drive chain or clutches. They are widely used as slush pump drives — operating on close centers without slipping and protecting the motor from shocks.

Write your nearest oil field office for detailed information on Allis-Chalmers oil field equipment. Stocks carried at Tulsa, Houston, Sweetwater, and Los Angeles.

ALLIS-CHALMERS MANUFACTURING CO., MILWAUKEE, WIS.

ALLIS-CHALMERS MOTORS *and* TEXROPE DRIVES

Products for the Oil Industry

Single and Double Reduction Units
Texrope Drives
Motors and Control
Drilling-Pumping-Pipeline
Transformers
Centrifugal Pumps
Pipe Line Pumps

OIL FIELD OFFICES

DALLAS
HOUSTON
NEW ORLEANS
KANSAS CITY
DENVER
LOS ANGELES
SAN FRANCISCO

WESTERN SUPPLY CO., Tulsa
WESCO SUPPLY CO. Los Angeles

MIGHTIEST OF ALL TRAVELING BLOCKS

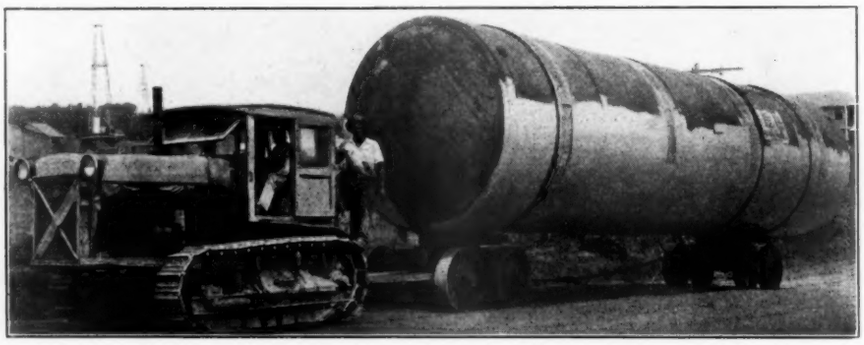
All Boykin three, four or five sheave roller bearing traveling blocks embody the four things essential to the perfect performance of a traveling block, viz: Bearings and Lubrication; Large Size Sheaves; Weight and Balance.

Every Boykin "Greyhound" Traveling Block has these features perfected to a degree that makes them the "mightiest of all traveling blocks." These traveling blocks are equipped with American Heavy Duty roller bearings and are lubricated by the Alemite system with individual connections to each sheave.

The Boykin patented oversize center pin bearing will carry 50 to 100% more load than any other block. All top bails of Boykin traveling blocks are guarded by protectors which give a sloping surface to the side of the block and guard it from becoming caught while in action. A heavy gauge sheet iron guard is standard equipment.

Write for our new bulletin giving complete details of construction and dimensions of all Boykin "Greyhound" Traveling Blocks.

BOYKIN MACHINERY & SUPPLY CO.
INCORPORATED
BEAUMONT, ~ HOUSTON, TEXAS



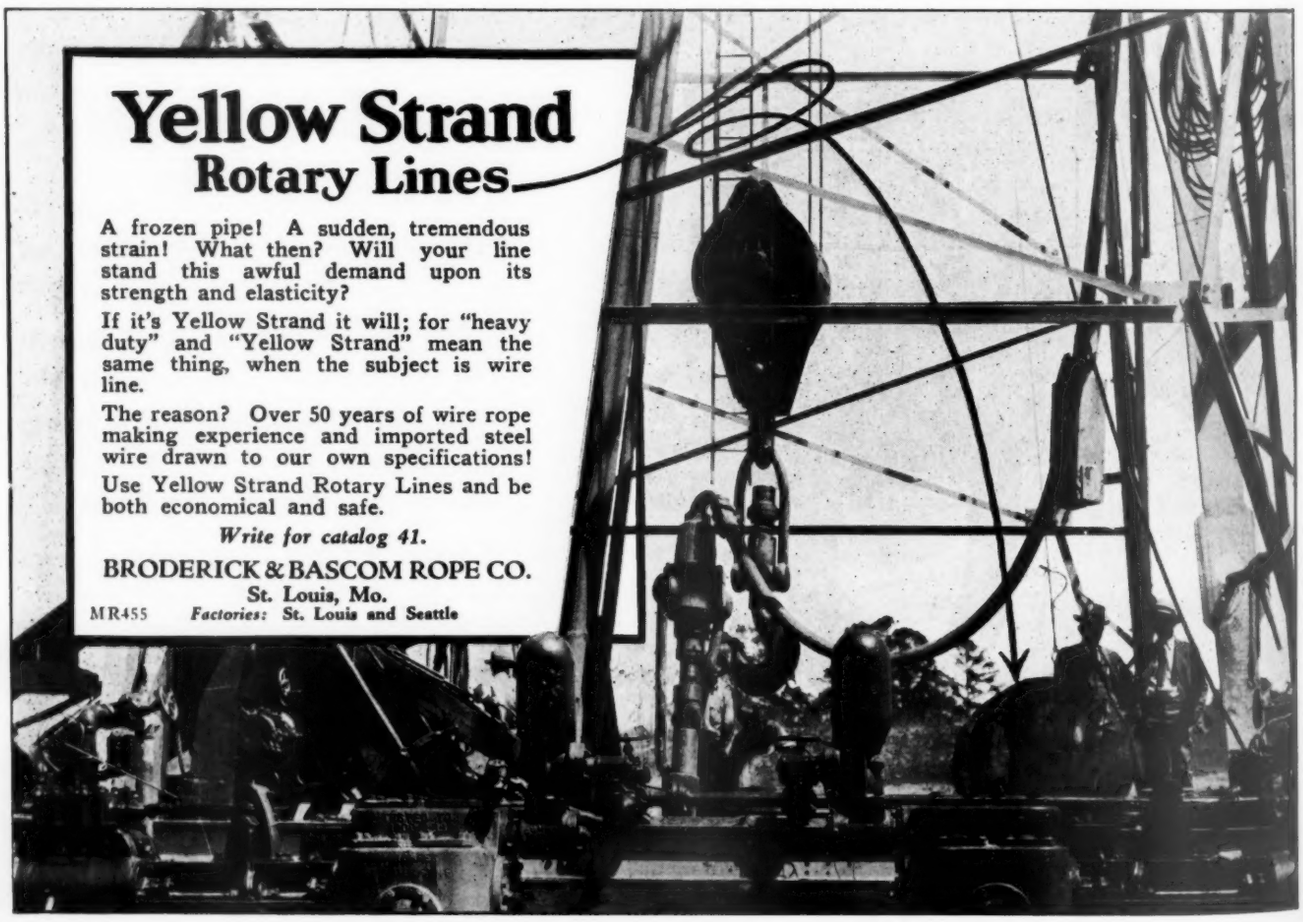
Big Boys

The big boys of the oil fields, the logging camps, anywhere out on the edge of things, like the strength they find in the MARTIN eight-wheel wagons. Here is a MARTIN going into the oil fields of Oklahoma with its prodigious load, but MARTINS do not care what they haul or where they haul it. Logs or machinery or railroad supplies or oil field equipment or lumber, on good roads or bad roads or into jungles.

MARTIN manufactures wagons and carts and trailers and truck bodies, hauling equipment for every purpose, for shipment anywhere. The wood is selected from our own sawmills, dried over periods as long as eighteen months, carefully covered with paint and oils. No matter what climate a MARTIN is sent to, it will not warp or swell or shrink. Seventeen years of manufacturing experience guarantees excellence.

THE MARTIN WAGON COMPANY
Lufkin, Texas

"MARTIN WAGONS HAUL ANYTHING"



Yellow Strand
Rotary Lines

A frozen pipe! A sudden, tremendous strain! What then? Will your line stand this awful demand upon its strength and elasticity?

If it's Yellow Strand it will; for "heavy duty" and "Yellow Strand" mean the same thing, when the subject is wire line.

The reason? Over 50 years of wire rope making experience and imported steel wire drawn to our own specifications!

Use Yellow Strand Rotary Lines and be both economical and safe.

Write for catalog 41.

BRODERICK & BASCOM ROPE CO.
St. Louis, Mo.

MR455 *Factories:* St. Louis and Seattle

Modern Drilling Conditions Demand

National Tools

Because They are

The Nelson Self-Expanding Slush Pump Piston withstands the strains of modern drilling operations because they are modern.

GREATER STRENGTH

EFFICIENT

DEPENDABLE

ECONOMICAL

LOWER COST

LONGER LIFE

ANGLITE, the super-diamond-sub metal represents the acme of black diamond substitution, for Anglited bits make more hole in any formation.

National Casing Protectors solve the operators casing-wear problems by eliminating the abrasive action of steel against steel. These protectors wear longer, cost less and are always efficient.

National
TOOL & METALS, INC.
P. O. BOX 818, TORRANCE 660
TORRANCE, CALIFORNIA

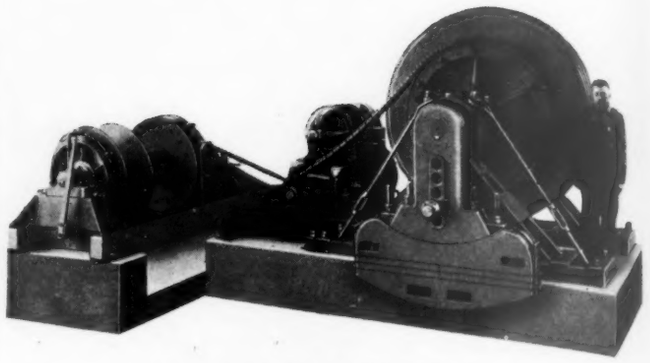
CRAFTSMANSHIP

A characteristic of the beaver and also of the skillful workmen who manufacture the products of The Garlock Packing Company, Palmyra, N. Y.

FELLING good-sized trees with their chisel shaped teeth, little beavers construct dams across streams with almost superhuman intelligence. After making their own "beaver pond" by backing up the water, they carefully select sticks, stones and mud with which to build their lodges at the edge of the pond. When completed, these "houses" are sufficiently strong and durable to withstand all the natural hazards of the locality in which they are situated. The entrances are under water—unseen and fully protected.

The mechanical ingenuity of the engineers and skilled workmen who build Quality Controlled Packings is not unlike the inherent craftsmanship of the beaver. Garlock trained craftsmen select all their crude materials with the greatest care by subjecting them to the most rigid laboratory tests. The basic quality of Garlock Packings is thus insured before the ingredients enter manufacture . . . and when completed the finished packings will give complete satisfaction on the intended installation as they are of a design and structure to meet its requirements.

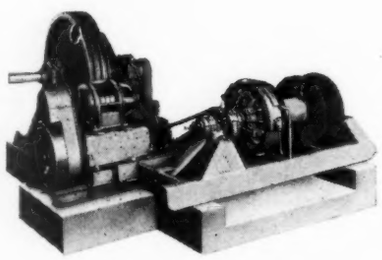
OCS
Rig Fronts



(PATENTS PENDING)

for Drilling or Pumping

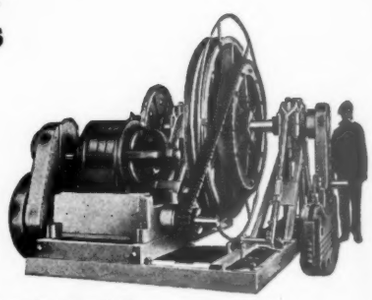
The Deepest Wells in the World



85E
With Triple Tug
AND
The O. C. S.
CHAIN DRIVE
SAND REEL

For Gas, Oil or Steam Engines

85C
WITH
The O. C. S.
Countershaft
Reversing
Clutch



Manufactured By

THE OIL COUNTRY SPECIALTIES MFG. CO.

COFFEYVILLE, KANSAS

TULSA, OKLAHOMA

SWEETWATER, TEXAS HYNES, CALIFORNIA

What about Shallow Drilling *with* BETTIS PROTECTORS ?

You've heard of the success of Bettis Protectors in drilling all of the deepest rotary holes during the past year. Now how about shallow drilling? The savings are just as great proportionately. You have friction to contend with in shallow holes. Even if only a few hours of rotary drilling is to be done Bettis Protectors will prove their worth.

One of the biggest Mid-Continent operators said he had only a plug to drill out — and so, didn't think it necessary to put in the Protectors. The two days ended and drilling kept right on. They drilled for 14 days and cored a very rich sand. Then pulled out to set a liner to bring in the well. They were unable to get back in the hole because the casing had collapsed. So the operator lost more on this hole than the cost of Bettis Protectors for many wells.

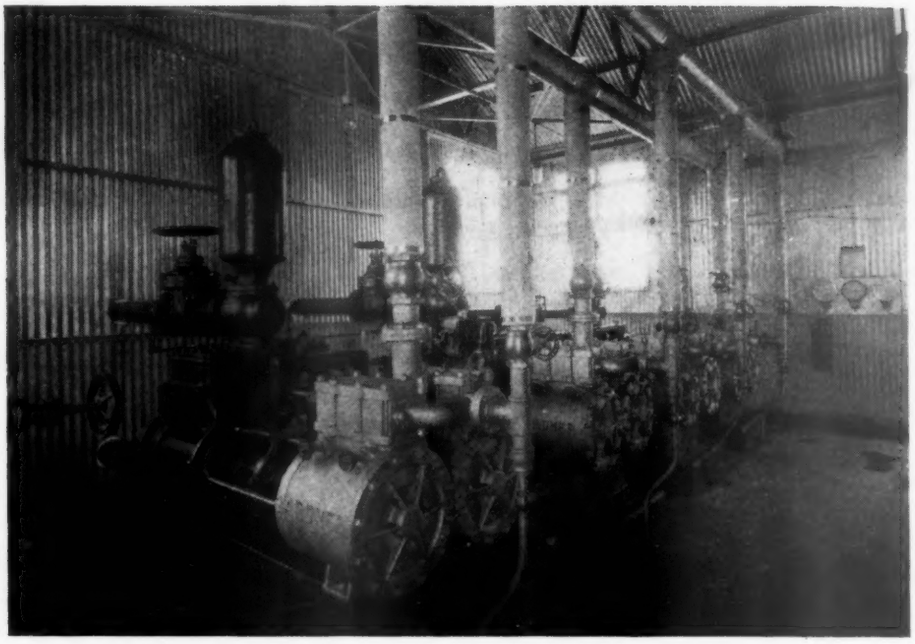
Needless to say, this operator has now given specific instructions to his crews and contractors never to run drill pipe in casing without Bettis Protectors.

Patterson-Ballagh Corp.
Insurance Exchange Building, Los Angeles
Mid-Continent Distributors:
Bettis Sales Co., 616 Public National Bank Bldg., Houston
New York Office: 39 Cortlandt St.
Carried in stock at Los Angeles, Santa Fe Springs, Ventura, Bakersfield, Coalinga, Long Beach, Tulsa, Houston, Wink, Texas; New York City.

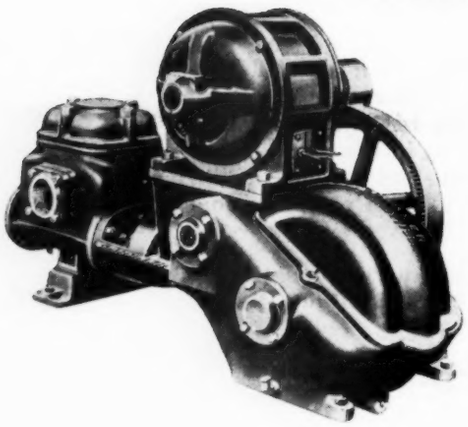
"Best bet yet!"

The Genuine Anti-Friction Rubbers...
No Seams · No Hinges · No Metal ·

In Service 10 years without overhauling



These Gardner-Denver Pumps in the Okmulgee Station of the Oklahoma Natural Gas Corporation have been in service for 10 years. Outstanding stamina, which means long service at low cost, is characteristic of all steam and power pumps designed and built for the petroleum industry by Gardner-Denver.



Power Pumps for all Refinery and Oil Line Service.

GARDNER-DENVER COMPANY
QUINCY, ILL.

FACTORY BRANCHES IN ALL OIL FIELDS.
OIL COUNTRY DISTRIBUTORS

Atlas Supply Co., - - - Muskogee, Tulsa, Ft. Worth.
Emsco Derrick and Equipment Co., - Los Angeles and Tulsa.
International Supply Co. - - - Stores in all Principal Mid-Continent fields.
Haywood-Williamson - - - Shreveport and El Dorado.
Norvell-Wilder Hdwe. Co., Beaumont, Houston and Fort Worth.
The Republic Supply Co. of Calif. - - Stores in All Principal Calif. Oil Fields.

GARDNER-DENVER

Using "INCOR" to cement a well in Wichita County, Texas. "INCOR" is now used for cementing in many of the largest fields.

The Quick, Easy, Economical Way to Cement Oil Wells

ENGINEERS have found that the speed, economy, and easy handling which make "INCOR" Brand Perfected High-Early-Strength *Portland* Cement the ideal material for cementing casings, make "INCOR" even more valuable for filling crevasses and other diffcult oil well work. "INCOR" has been used successfully to fill large crevasses after all other methods have failed.

"INCOR" Brand contains no admixtures; requires no special methods of handling. Mixes readily without lumping. Quicker and easier to use than ordinary cement plus accelerator; in practically every instance, "INCOR" is *cheaper* to use than ordinary cement and accelerator.

Try "INCOR" Brand for your next oil well cementing job.

INTERNATIONAL SYSTEM
LONE STAR CEMENT
A PERFECTED HIGH-EARLY-STRENGTH
"INCOR"
PORTLAND CEMENT

Outstanding quality and a policy of fair business dealing have earned nation-wide recognition for LONE STAR Cement. Now, to meet the need for dependable 24-hour concrete, the makers of LONE STAR also offer "INCOR" Brand.

INTERNATIONAL CEMENT CORPORATION

342 Madison Avenue, New York

One of the world's largest cement producers — 13 mills . . . total annual capacity 21,000,000 barrels

SUBSIDIARIES

LONE STAR CEMENT COMPANY ALABAMA
Birmingham, Alabama

LONE STAR CEMENT CO. INDIANA, Inc.
Indianapolis, Indiana

THE CUBAN PORTLAND CEMENT CORP.
Havana, Cuba

LONE STAR CEMENT CO. PENNSYLVANIA
Philadelphia, Pennsylvania

THE LONE STAR CEMENT CO. (KANSAS)
Kansas City

LONE STAR CEMENT CO. VIRGINIA, Inc.
Norfolk, Virginia

LONE STAR CEMENT CO. NEW YORK, Inc.
Albany, New York

LONE STAR CEMENT CO. LOUISIANA
New Orleans, Louisiana

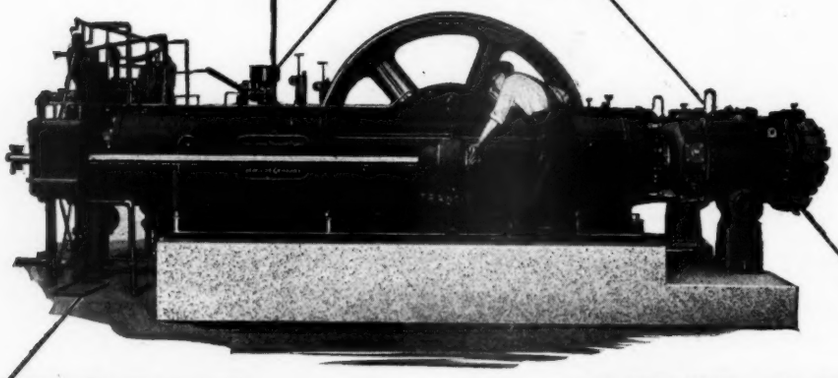
ARGENTINE PORTLAND CEMENT CO.
Buenos Aires, Argentina

LONE STAR CEMENT COMPANY TEXAS
Dallas and Houston, Texas

URUGUAY PORTLAND CEMENT COMPANY
Montevideo, Uruguay

XUM

SILENT



RIGID STRONG

The foundation for long machine life

TRANSIT

17x24" GAS ENGINE GAS COMPRESSOR

The catalogue on this engine is yours for the acting. - - - Act now!

Agents
FRICK-REID SUPPLY CORPORATION
Tulsa, Okla., or any store.

REPUBLIC SUPPLY COMPANY
of California
Los Angeles, California

E. L. WILSON HARDWARE CO.
Beaumont, Texas.

PUMPS **TRANSIT** ENGINES

NATIONAL TRANSIT PUMP & MACHINE CO. Oil City, Pa.

DISTRICT OFFICES
NEW YORK PHILADELPHIA PITTSBURGH
CLEVELAND HOUSTON TULSA LOS ANGELES

Agents
F. C. RICHMOND MACHINERY CO.
Salt Lake City, Utah.

REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.